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FORWARD SUPPORT COMPANY OPERATIONS IN HAITI

Sustaining an Afghan National Army Embedded Training Team
The Corps Logistics Planning and Decision Cycle
The Army Airlift Clearance Authority

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Cover: While combat operations continued in Afghanistan and Iraq, the Army, in January, responded to a different type of contingency: humanitarian assistance and disaster relief in Haiti following a catastrophic earthquake. The article beginning on page 6 describes the challenges faced by a forward support company of the 82d Airborne Division in the nonhostile but unstable environment of post-earthquake Haiti. In the cover photo, Soldiers help the crew of a Navy MH-53E Sea Dragon helicopter from the aircraft carrier USS *Carl Vinson* unload food and supplies at the airport in Port-au-Prince, Haiti. (Photo by PO2 Daniel Barker, USN)



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The SCoE Simulation Center Supports Training for a New Deployment Mission

BY MAJOR JEFFREY L. SCHULTZ AND RALPH L. POOLE

In October 2009, the 240th Quartermaster Battalion at Fort Lee, Virginia, was notified that it would deploy in support of Operation Iraqi Freedom in early 2010 as a combat sustainment support battalion (CSSB). This announcement presented the unit's relatively inexperienced staff with the dilemma of planning, training, deploying, and executing an entirely new mission in a short timeframe.

The training required coordination with many external organizations. Exercise planners within the Sustainment Center of Excellence (SCoE) and the Logistics Exercise and Simulation Directorate (LESD) took advantage of the opportunity to support the unit in its training while also assessing the capabilities of the newly established SCoE Simulation Training Center (STC).

The 240th Quartermaster Battalion is one of two Active Army pipeline and terminal operating battalions. It commands and controls six active-duty companies: a headquarters company, two petroleum pipeline and terminal operating companies, one mortuary affairs company, and two petroleum supply companies. The battalion's new role as a CSSB requires it to perform a multifunctional mission with a mix of Active and Reserve component subordinate sustainment companies from other installations.

Lieutenant Colonel Skip Adams, the battalion commander, considered the challenges faced by the 240th and asked training activities located at Fort Lee for assistance. Colonel Sharon L. Leary, director of LESD, a tenant activity at Fort Lee and a directorate of the National Simulation Center (at Fort Leavenworth, Kansas), agreed to support the unit in this effort, which fell under the LESD's primary mission—to properly train sustainment staffs to perform battle command missions. The intent was to support the planning and execution of a simulation training exercise tailored to meet the unit's specific training objectives.

The exercise took place during the first week of December 2009 and consisted of a series of master training events supported by the Joint Deployment Logistics Model (JDLM). JDLM is the primary training simulation for logistics and is used to simulate the Army's Battle Command Sustainment Support System.

The 240th Quartermaster Battalion, using JDLM, was able to replicate reporting procedures from subordinate units and create logistics status reports to transmit to higher headquarters. The unit was also able to simulate various transportation, maintenance, and personnel issues that it might experience during its deployment to Iraq.

The officers and civilians of the STC provided guidance and direction on training plans and events while learning new techniques and procedures for conducting an exercise at the battalion level. Assisting a battalion with building an exercise was new ground for STC simulation trainers as well as for the members of the 240th. The two groups worked together closely to create and execute a battalion-level command post training exercise that met the commander's expectations and provided the battalion staff with greater confidence in assuming its new mission.

The 240th Quartermaster Battalion, assisted by members of the STC, successfully executed the exercise and met its short-term training objectives. The achievement was considered a success not only for the 240th but also for the STC. Members of the SCoE and LESD were able to exercise the original STC concept and are now developing a pilot training program designed to support future units with similar training requirements. Continued improvements to this new capability will complement the Army's Battle Command Training Strategy by incorporating training support from the Army's newly established centers of excellence.

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Sustaining an Afghan National Army Embedded Training Team

BY MAJOR DAVID L. THOMPSON AND CAPTAIN CHRISTINE M. RHYNE, USAF

As embedded training teams (ETTs) in eastern Afghanistan roll out the gate of their assigned Afghan National Army (ANA) base in Khost province, a small crew of unique logisticians seamlessly and proactively supports the combat advisory mission and ensures operational success on the battlefield.

The Soldiers, Sailors, and Airmen assigned to the 1st Brigade, 203d Regional Corps Advisory Command-East (RCAC-E), are embedded with the ANA's 1st Brigade, 203d Corps. With three infantry kandaks (battalions), a combat support kandak, a sustainment kandak, and a brigade headquarters company, the ANA brigade closely resembles the basic structure of a U.S. infantry brigade combat team.

ETTs, which have up to 16 personnel, work daily to refine the administrative, intelligence, operations, logistics, communications, and command and control aspects of their affiliated ANA organizations. While the brigade and battalion ETTs' focus is to mentor the ANA to conduct independent counterinsurgency operations to defeat terrorism in Afghanistan, the internal sustainment of these teams requires just as much effort as the mentoring mission.

No Cookie Cutter Concept of Support

The diverse nature of Combined Joint Task Force Phoenix—the command and control element for army and police mentoring organizations in Afghanistan—causes significant challenges to developing a single, comprehensive concept of support across the 203d RCAC-E. The J-4 directorate of the Afghan Regional Security Integration Command-East bridges the gap to ensure overall sustainment in eastern Afghanistan. The J-4 oversees dozens of mentoring teams located in extremely austere and remote locations. The lack of coalition units creates an additional challenge because the type of support provided to advisory teams in Iraq is just not possible in Afghanistan.

Within the 203d RCAC-E, three brigades of mentors are located at dozens of locations with varying levels of internal capabilities. All ETTs under the 1st Brigade, 203d RCAC-E, maintain their primary presence in Khost province at Camp Clark, a small forward operating base (FOB) built inside the walls of the ANA's Camp Parsa, the home of 1st Brigade. Having all ETTs based out of this single location ensures synchronization of the operational and mentoring efforts and allows for the transparency of each team's logistics requirements.

This is not necessarily true of other brigades, as many of them have teams permanently scattered all over their respective provinces.

Although minimal doctrine or institutional knowledge exists to specifically support the ETT mission, the basic concepts of sustainment in Field Manual 4-0, Sustainment, and Command and General Staff College Student Text 101-6, Theater Sustainment Battle Book, provide adequate guidelines to ensure that those deep in the mentoring fight—brigade-level ETTs—are capable of developing, maintaining, and improving valid concepts of support for their organizations. Those guidelines can be applied to essentially every ETT sustainment scenario and result in mission-specific concepts of support with minimal external support requirements.

Joint Nature of ETT Sustainment

The four logisticians assigned to the brigade S-4 section of the 1st Brigade in 2008 dedicated their year-long tour to fulfilling the basics of taking care of Soldiers, Sailors, and Airmen tasked with mentoring the ANA. The path to success was nothing more than answering these simple but often asked questions: If we need something, how do we get it? If we have something and it is broken, how do we get it fixed or replaced?

While a standard brigade S-4 section may include a few officers, a few senior noncommissioned officers (NCOs), a warrant officer, and a few enlisted Soldiers, the 1st Brigade leaders diversified the section with their limited personnel resources. The officer slotted as the officer-in-charge (an Army logistics captain) had the primary role as the ANA brigade S-4's mentor and also had the specified task of ensuring that all aspects of internal U.S. sustainment were managed. The assistant brigade S-4 (an Air Force logistics readiness first lieutenant) oversaw the section in the S-4's absence and also served as the brigade's property book officer.

The brigade S-4 NCO-in-charge (a Navy chief petty officer) managed all aspects of supply acquisition. The brigade maintenance management NCO (an Air Force staff sergeant) directed all combat vehicle maintenance operations with four civilian mechanics and served as the primary Standard Army Maintenance System-Enhanced (SAMS-E) operator and class IX (repair parts) manager.

The officer-in-charge was the only staff member with plenty of exposure to Army sustainment operations. Learning new logistics systems and policies

IN THE BRIGADE ETT ENVIRONMENT, THE MISSION REVOLVES AROUND THE COMBAT ADVISORY ROLE, SO A BALANCE MUST BE STRUCK BETWEEN PROVIDING SUSTAINMENT FOR SURVIVAL AND COMFORT AND COACHING, TEACHING, AND MENTORING THE ANA.

presented challenges to the Air Force and Navy personnel, but their desire to ensure that the brigade was supported quickly resolved the problem. Continuity documents established by previous logistics ETTs fostered a reduced learning curve, but keeping the focus simple—finding the easiest path to get what was needed and getting what was broken fixed or replaced—remained the focal point in reducing the time it took to learn the complex systems.

Property Acquisition and Accountability

Property accountability is a task easily accomplished when ideal conditions are present. Without distracters or limiting factors, essential accountability tasks, like reconciling the property book monthly, performing cyclic inventories, processing change-documents in real time, and keeping sub-hand receipts current, are not difficult to perform. In 2008, more often than not, the ETTs suffered from less-than-ideal circumstances for maintaining real-time property accountability. Down-range missions, personnel turn-over, and constantly evolving tactics, techniques, and procedures did not allow for the “auto-pilot” accountability that many Army units with standard supply personnel enjoy.

Despite the challenges, accountability was maintained using a variety of tools and methods. Having a dedicated property book officer assigned to manage the brigade’s property and facilitate and simplify all property-related tasks for each ETT helped tremendously. Although each ETT assigned its own logistics representative to manage its property, the logistics adviser at the battalion level typically wore two hats—one as the team’s logistician and the other as an ANA mentor.

Other accountability challenges were met through the use of modern technology and communications platforms, such as Blue Force Tracker, secured radio communications, and email through the Unclassified but Sensitive Internet Protocol Router Network and broadband global area network in remote locations. In many cases, accountability was maintained through the basic manual procedures of Department of the Army Pamphlet 710–2–1, Using Unit Supply System (Manual Procedures).

Maintenance Management

Through the manning process, the brigade received an Air Force wheeled-vehicle mechanic staff sergeant. Typically, an Air Force staff sergeant does not manage

maintenance at the brigade level, but this staff sergeant followed simple guidance, executed the maintenance management task, and ensured maximum combat power was employed. His efforts resulted in a 94-percent operational readiness rate.

The Air Force mechanic did not do this alone. With a fleet of over 40 combat vehicles—a combination of M1114 and M1151 up-armored high-mobility multi-purpose wheeled vehicles, RG–31 mine-resistant ambush-protected vehicles, and a 5-ton cargo truck—the brigade had difficulties meeting even the basic requirements of The Army Maintenance Management System and higher-headquarters directives. Four civilian mechanics and one contractor supervisor also worked to ensure that all combat vehicles assigned to the brigade and FOB tenant units received scheduled and unscheduled field-level maintenance. They also completed modification work order actions to ensure modernization and safety on the battlefield.

Standard Army Management Information System (STAMIS) operators rarely wear “U.S. Air Force” on their uniforms, but 1st Brigade’s maintenance NCO also served as the primary Unit Level Logistics System-Ground operator and, eventually, the SAMS–E operator. Quickly learning the basics of repair parts management, fault and work order management, and not mission capable reporting procedures, the Airman directly influenced every aspect of the maintenance management process. He ensured the basics of maintenance management were met. If a vehicle needed parts, he made sure that the required forms were filled out correctly and provided daily status reports through the very small aperture terminal.

Through regular visits to FOB Salerno, the brigade maintenance NCO and brigade S–4 NCO-in-charge coordinated with the class IX supply support activity (SSA) operated by KBR for responsive repair parts support, including class IX requests, receipts, and retrograde. While most customers requesting, receiving, and turning in parts were Army personnel, 1st Brigade’s representative was one of the only customers in the country wearing the Airman battle uniform.

Supply Management

Because of the unique organization of each ETT, ensuring that the teams received all needed supplies forced direct dialog between the team logistician and the brigade’s supply NCO. In 1st Brigade’s case, the

supply NCO was also the brigade S-4 NCO-in-charge and a career Navy storekeeper. By implementing a basic process of demand analysis and mission analysis, the supply NCO identified requirements and employed all resources to secure supplies. Regardless of the service branch, the section's focus was on anticipating and aggressively meeting all identified requirements.

Maintaining the required days of supply stock-age and sufficient meals ready-to-eat, unitized group rations-express, and bottled water ensured that each team could deploy with their ANA counterpart with no class I (subsistence) shortfalls. Using simplified logistics status reporting, the brigade worked directly with the Joint Logistics Command class I manager for timely resupply based on average delivery times.

For general supplies, basic loads for both the brigade and battalion teams were maintained for daily use and for sustained operations away from the general brigade area. Specific requirements during operations were pushed to the brigade via Blue Force Tracker and addressed immediately.

Because it did not have an actual STAMIS to order class II (clothing and individual equipment) supplies, the brigade created a basic text file for class II orders that was readable by the Standard Army Retail Supply System (SARSS). The file contained the basic information required for each request—document type, document number, national stock number, quantity, and priority—and was formatted to be sent as an email attachment and loaded into SARSS. The same KBR SSA that processed class IX requests from SAMS-E also received and processed the class II requests. The brigade maintenance NCO and brigade S-4 NCO-in-charge worked together to coordinate transportation for the supplies each week.

The robust and centralized nature of Camps Parsa and Clark provided a strong balance of fuel capabilities. KBR was the primary provider of bulk class III (petroleum, oils, and lubricants), and all packaged class III products were requested through SAMS-E and managed under the maintenance umbrella.

During combat operations, ETTs within the brigade employed all available resources—internal capabilities, coalition forward support companies operating in the brigade area, and ANA supply companies—to ensure freedom of maneuver without fuel limitations. Coordinating the effort during operations helped foster the relationships between coalition support units and the ANA. However, to reduce the dependence on coalition resources, ETTs focused on internal sustainment and ANA support.

In conjunction with the class II and IX efforts, the brigade managed the class IV (construction and barrier materials) requirements through the same KBR SSA. Using a standardized bill of materials request, the brigade submitted requirements through the battlespace owner's class IV manager. Once approved, the brigade

picked up the supplies along with the classes II and IX supplies or formally requested delivery by host-nation support transportation. The brigade also maintained a moderate supply of construction materials to support time-sensitive contingency operations.

Through coordination with the Afghan Regional Security Integration Command J-4 ammunition manager, all valid class V (ammunition) requirements were fulfilled and ammunition basic load (ABL) stocks were maintained at the brigade and battalion ETT levels. As ammunition was expended, standard consumption reports were submitted through the J-4 and brigade-level ABL requirements were sustained.

The S-4 section in a standard infantry brigade combat team is staffed with a diverse crew that synchronizes each sustainment function to meet the commander's intent and ensure operational success without logistics shortfalls. In the brigade ETT environment, the mission revolves around the combat advisory role, so a balance must be struck between providing sustainment for survival and comfort and coaching, teaching, and mentoring the ANA. While each staff adviser in the brigade ETT has some form of both U.S. and ANA responsibility, the lack of oversight from the S-4 on both sides could quickly result in Soldiers, Sailors, or Airmen going without food, fuel, water, ammunition, or repair parts.

The organizational sustainment structure in the 1st Brigade (limited in personnel and joint in nature) required balancing the efforts of the advisory mission with a complete understanding of specified and implied sustainment tasks. No action was taken unless a measurable return on investment was guaranteed to result in an improved readiness posture for the brigade or battalion ETTs.

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Forward Support Company Operations in Haiti

BY CAPTAIN JULIO J. REYES

Supporting humanitarian aid in the wake of the massive Haiti earthquake required a forward support company of the 82d Airborne Division to develop a different approach to its logistics mission.

On 12 January 2010, Haiti's capital city, Port-au-Prince, was hit by a massive 7.0 magnitude earthquake. The 2d Brigade Combat Team (BCT), 82d Airborne Division, assigned as the Nation's global response force, was called to provide humanitarian aid, assistance, and disaster relief within the city. Before the deployment, many of the BCT's logisticians made assumptions about what their mission would be and where their focus should be to conduct operations in a very unstable and "different" environment. The environment would be different because Haiti is not Iraq or Afghanistan, so the logisticians needed to adopt a different mentality for this humanitarian mission.

G Company, 407th Brigade Support Battalion, is the forward support company (FSC) for the brigade's fires battalion, the 2d Battalion, 319th Airborne Field Artillery Regiment, which has over 350 paratroopers. G Company personnel were tasked not only to support the battalion logistically but also to assist many nongovernmental organizations (NGOs) that were providing humanitarian assistance in the battalion's area of operations.

FSC Capabilities

The FSC has a maintenance section, a food service team, a distribution platoon, and a company headquarters. For this mission, the FSC deployed with a maintenance package that included two contact trucks, an M984 heavy expanded-mobility tactical truck (HEMTT) wrecker, a very small aperture terminal (VSAT), a hazardous materials (HAZMAT) container, and Standard Army Management Information Systems (STAMISs), including the Standard Army Maintenance System (SAMS) and Property Book Unit Supply Enhanced for maintenance and supply.

The distribution platoon deployed with two HEMTT fuelers, two high-mobility multipurpose wheeled vehicles (HMMWVs), and eight light medium tactical vehicles (LMTVs). Each vehicle and system proved to be critical to mission success. After the first 3 weeks in Haiti, the FSC received additional HMMWVs to assist with command and control. However, because of the speed of the deployment and

the demand on transport aircraft and boats for moving supplies and equipment to Haiti, the FSC usually had only 14 vehicles on the ground.

Distribution Platoon

Perhaps the busiest section in the FSC was the distribution platoon, whose trucks and personnel were the first on the ground. The platoon deployed immediately after a field training exercise at its home station, Fort Bragg, North Carolina, where use of the LMTV fleet was an everyday operation. Preventive maintenance checks and services (PMCS) and knowledge of truck operations proved to be critical when the unit arrived at the Port-au-Prince airport.

The platoon had the mission of picking up humanitarian aid, which included pallets of meals ready to eat (MREs) and water. Pallets were built based on what humanitarian aid was available for the battalion to distribute. The platoon's truckdrivers were tasked to ensure that they maximized loads without overbearing the trucks and to push class I (subsistence) and water to the rest of the troops. The FSC had only three trucks during the first week and then received the rest of its eight LMTVs in the following days. PMCS and truck management were critical because of the challenging conditions on the streets and the distances the platoon had to drive to get to each humanitarian aid site.

Haitian traffic is very aggressive, and even though there was no threat of improvised explosive devices on the roadway, the flow of vehicles, motorcycles, and people walking and running the streets with little or no regard for traffic laws required drivers to pay careful attention and drive defensively. Constantly operating the trucks in such traffic caused wear and tear on both brakes and drivers. Eventually, the distribution platoon developed into a movement control team.

Working With Humanitarian Aid Providers

After a week of staying at the airport, the FSC moved to a local soccer field. This location provided the extra space needed to control movement of supplies and conduct maintenance. But moving to a larger piece of real estate meant it also gained the mission

One of the platoon's noncommissioned officers discusses distribution with locals.

of securing Government organizations and NGOs that were sharing the new living site.

The FSC lived with a U.S. Department of Health and Human Services-sponsored disaster medical assistance team (DMAT), which was deployed for 2 weeks from Dayton, Ohio, to assist with medical aid and house an onsite clinic. Also living with the unit was an NGO known as the Utah Hospital Task Force, which comprised over 120 medical personnel, including nurses, doctors, surgeons, and missionaries who speak fluent Creole.

The FSC was not only responsible for security; it also adopted the mission of transporting medical personnel to various hospitals in the brigade area of operations. The DMAT onsite medical center treated an average of 400 Haitians a day. Many had to be transported to the Navy hospital ship USS *Comfort* and other, larger hospitals in Port-au-Prince. Since the FSC did not own front-line ambulances, it had to use one of its two cargo HMMWVs to move patients.

Movement Control

The improvised movement control team (the distribution platoon) balanced the transportation of 120 personnel to multiple hospitals, patient transfers, classes I and IX (repair parts) delivery for the battalion, and delivery of humanitarian aid in the form of bags of rice, pallets of MREs, water, and tents. Each truck was managed very deliberately, and the FSC formed operational relationships with the DMAT and NGOs in order to maximize its combat power at the times when FSC assets would be used. The FSC reserved two or three trucks to use for a shuttle service each day, with organized morning dropoff and afternoon pickup times at multiple hospitals.

Because of the high volume of traffic on the major routes in Port-au-Prince, the shuttle left each morning at 0630 and picked up personnel daily at 1630. The average travel time was 2 to 3 hours during the busiest part of the day. Traveling early and during the late afternoon allowed for smooth traffic flow and permitted the unit to use the same trucks to conduct sustainment pushes to the batteries it supported. The rest of the vehicles were used to conduct humanitarian aid deliveries to different camps and to transport patients. Overall, the FSC averaged up to 7 different missions a day with only 8 trucks, and each mission required 2 trucks.

When the FSC conducted convoys, it always traveled with two security vehicles to maintain security and enable self-recovery of a disabled truck if necessary. The unit's communication package was man-pack radios using single-channel plain text to keep in contact with the company and battalion. The FSC



balanced drivers by morning and afternoon shifts to avoid driver fatigue on busy streets.

Humanitarian aid came in various forms, but the most common was 100-pound bags of rice and grains. The maximum truck capacity was 230 bags on one truck. The trucks would travel with the bags covered by tarps to avoid local attention and ensure that the supplies would get to the intended locations without problems.

When transporting personnel, the distribution platoon moved 12 on a truck with 2 armed Soldiers in the back. The streets were calm, and violence was not a threat. However, both organizations that it supported required security escorts on their missions. The DMAT and Utah Hospital Task Force were very thankful for the transportation and security operations, which allowed their teams to have a big impact within the battalion's area of operations.

One of the hospitals in which the Utah Hospital Task Force operated was the largest hospital in Port-au-Prince. The unit regularly transported the senior volunteer surgeon, volunteer chief of staff, and head nurse. Few Haitian doctors were available to assist at the hospital during the first few weeks after the earthquake, so moving the task force's personnel became a priority. Each day, these medical professionals treated anywhere from 400 to 1,000 patients with various earthquake injuries and illnesses.

On average, the FSC had up to 3,000 gallons of JP8 fuel on hand and never fell below 2,000 gallons. The FSC's fuelers would only leave the forward operating base to receive fuel at the airport, so the batteries it supported would come to get fuel. Bulk water was stored in a water buffalo since the forward area water supply system 500-gallon water blivets were given to the brigade to consolidate water storage.

Distribution Lessons Learned

Some of the lessons the distribution platoon learned were how to manage the cycle of truck missions, from initial PMCS to convoy missions to after-mission PMCS, and how to set priorities with a fleet of only eight trucks. Convoy briefings and precombat checks and inspections were critical because the dynamics of the Haitian traffic and movement in the city required very deliberate convoy rehearsals and leadership roles. Each member of the platoon became involved with every mission, whether they had military occupational specialty (MOS) 92F (petroleum supply specialist), 88M (motor transport operator), or even 92W (water treatment specialist).

The deployment provided an opportunity for driver's training and allowed the FSC to see the capabilities of its LMTVs, which they normally would not use in Iraq or Afghanistan. It also allowed the company to see how it could maximize pallets and supplies in the back of one of these trucks. The distribution platoon was the FSC's workhorse.

The natural disaster of the Haiti earthquake created operating conditions very different from those the Army faces in Iraq and Afghanistan. Note the destruction caused by the earthquake on the left side of the street.



Maintenance

The FSC found it to be incredibly important to keep the LMTV fleet on the road. PMCS performed by unit mechanics were critical to maintaining stable combat power. The unit was afforded only one parts container and one HAZMAT container. The maintenance technician and maintenance control noncommissioned officer had the challenge of choosing which parts would be most needed for this type of deployment. Automotive parts were the priority, followed by electronics. Weapon maintenance was a lesser priority.

The maintenance section focused on brake fluid, oil, glow plugs, transmission fluid, seals, gaskets, air filters, and other service parts. Parts vital for maintenance conditions on the ground, such as transfer cases, transmissions, power-steering pumps, and tires, were not authorized as shop stock at the time of the deployment. Under warehouse regulations, modular supply support activities would not allow the FSC to maintain recoverable items.

When a truck became not mission capable and the section did not have the repair parts needed to fix it, the maintenance personnel worked with other maintenance teams within the BCT to look for parts. Finding parts within the BCT was necessary for several reasons: Other missions had a higher priority for class IX; most supplies were coming by aircraft, but the airport had no surplus storage space and repair parts were not a priority for that space; and boats with supplies did not come until a week or so after the brigade deployed. Self-

sustainment thus became the standard maintenance practice. With this condition set, driving techniques and operator maintenance became even more important to keeping vehicles in proper working condition.

Many of the streets in Haiti had rubble from the earthquake and many roads were unfinished, which meant the FSC's vehicles regularly drove over potholes and other unstable terrain. Warm temperatures and high humidity also adversely affected truck operations. These environmental conditions caused wear and tear on shocks, brakes, tires, and transmissions. As the battle rhythm became more predictable, the FSC started conducting services. The maintenance section serviced an average of two to four trucks for the battalion daily. This allowed the FSC not only to get ahead of the service schedule but also to diagnose and foresee any maintenance issues it might face.

G Company's distribution platoon served as an improvised movement control team to deliver humanitarian aid in the form of bags of rice, pallets of meals ready to eat, water, and tents. Navigating through the streets of Port-au-Prince was a challenge. Constant pedestrian and vehicle traffic made maneuvering in the streets almost impossible and required platoon truckdrivers to drive defensively.

The FSC's maintenance combat power included two contact trucks (one of which went to A Battery, which was based at a different location) and two maintenance support teams. The teams each had three mechanics who provided on-the-spot maintenance support to the batteries and worked well with the batteries' operational tempo.

The most critical MOS for the maintenance section was 91D, generator repairer. The FSC had one at each site. These repairers also served as master electricians for many of the hardstand buildings that housed the troops. The 91D team at the soccer field rewired the hardstand building that housed the command post and soccer field lights. The FSC deployed with STAMISs and were able to use VSAT to access Army Knowledge Online since it did not have a hub for the Unclassified but Sensitive Internet Protocol Router Network.

At times, the company faced connectivity and data blast issues when using SAMS-2 and the Standard Army Retail Supply System, so it ran disks daily to A Company, 407th Brigade Support Battalion (BSB) to mitigate the problems. The FSC still ran Army Materiel Status System reports and conducted normal maintenance shop operations, even though conditions on the ground were still being set.

Headquarters and Security

To transport thousands of humanitarian aid supplies and hundreds of NGO personnel and to secure a site for treating over 4,000 Haitians, the FSC needed a command and control element and adequate security. During the military decision making process, the FSC made a conscious decision not to deploy its containerized kitchen and food service equipment. Planners based this decision on assumptions about conditions on the ground, the length of the deployment, and the availability of space on watercraft and aircraft. MREs and water were the standard for class I consumption.

With that being said, the FSC used its food service team, headquarters elements, and small elements of the distribution and maintenance platoons to pull security on the compound. Three shifts of eight personnel ran security at the site.

Even though the threat of enemy activity was almost nonexistent and the Haitian people were very supportive of the FSC's assistance and operations, the humanitarian mission proved to be very challenging and much more complicated for a logistics unit than many would think.



The FSC deployed with all organizational equipment less than a week after coming out of a field exercise and did not have much formal training on how to work with other Government organizations and NGOs. The FSC had to organize and plan logistics and humanitarian missions with a small amount of combat power and deploy to a theater of operations that had no military logistics hub. This was a tough and challenging mission for the paratroopers, but they did what all great paratroopers do—accomplish the mission and exceed expectations.

As the deployment progressed, the 7th Combat Sustainment Support Battalion arrived with shower, laundry, maintenance, and other logistics support. However, the 2d BCT's FSCs and BSB were the logistics answer while all other units were conducting refugee camp assessments and humanitarian missions. Balancing both humanitarian and logistics missions created many challenges, but the paratroopers of the 2d BCT were on point. Many of the tactics, techniques, and procedures used in Haiti can be applied to Iraq and Afghanistan deployments, from operational readiness of equipment, to personnel management, to sustaining a force in austere conditions.

Rules of engagement and escalation of force for a country in need proved challenging for the paratroopers. Most were combat veterans of the U.S. Central Command area of responsibility, and they learned to approach the local citizens in the post-earthquake conditions in Haiti differently than they had in Iraq and Afghanistan. Fortunately, most of the Haitians the Soldiers met supported the mission and were very friendly. Assisting the Haitian people after the earthquake was very fulfilling and gave the team a great sense of accomplishment.

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Increasing and Sustaining the Polish Military Contingent in Afghanistan

BY MAJOR ERIC R. PETERSON

The Polish military contingent Task Force White Eagle deployed to Afghanistan in support of Combined Joint Task Force 101 (CJTF-101) on 30 October 2007. Task Force White Eagle originally consisted of about 1,000 Polish soldiers fighting alongside U.S. forces deployed to Paktia, Paktika, and Ghazni provinces. Most of the task force was based out of Forward Operating Base (FOB) Sharana and Combat Outposts Waza Khwa and Kushamond. One Polish company occupied FOBs Ghazni and Warrior and Nawa Fire Base.

Increasing the Polish Force

In the fall of 2008, the Polish government authorized an increase of forces and capabilities in Afghanistan. This increase included 600 additional troops, an aviation detachment of 4 Mi-24 Hind helicopter gunships, 4 Mi-17 Hip multirole helicopters, and a fire support section comprising 4 DANA 152-millimeter self-propelled gun howitzers.

The increase of Polish forces also called for a realignment of the battlespace between Task Force White Eagle and Task Force Red Currahee (1st Battalion, 506th Infantry Regiment). The realignment stationed all Polish forces in Ghazni, and the U.S. forces realigned to cover down in Paktia and Paktika.

Task Force White Eagle now fully occupies FOBs Ghazni, Warrior, and Four Corners and Giro District Center. It also has two additional combat outposts, Askercot and Qarabaugh, to secure Highway 1. Four hundred more Polish soldiers deployed in support of Task Force White Eagle in the summer of 2009. This increase brought the total number of Polish soldiers in Afghanistan to more than 2,000.

Planning and preparing for this effort began immediately after the notification of the increase in the Polish military contingent, which coincided with Task Force White Eagle rotations I and II. Logistics and engineering planners in CJTF-101 quickly went to work putting together a plan that would allow for not only the increase of the Polish military contingent but also the realignment of the battlespaces and additional construction requirements to relocate Task Force Red Currahee to Paktika.

Preparing for the Increase and Realignment

The expansion of facilities was the top priority of the planners and task force commanders in the battlespace

realignment. Before any logistics or engineering planning could occur, the acquisition and cross-servicing agreement (ACSA) between Poland and the United States had to be understood by both sides. The ACSA outlines what types of support and services the United States can give to another government and the financial responsibilities incurred by the recipient.

The ACSA calls for a repayment in kind for services. The mechanism to execute the transaction is the U.S. Central Command (CENTCOM) Form 35. Form 35s are submitted with every support transaction and serve as the method of reimbursement from CENTCOM. Construction requirements must comply with U.S. codes and are limited to a maximum of \$750,000 in Contingency Construction Authority funds per project.

To initiate the numerous construction projects that were required to make the increase of Polish forces and relocation of U.S. forces possible, joint facilities utilization board (JFUB) packages were completed and submitted for approval and funding. The construction projects included the building of brigade and battalion tactical operation centers, permanent and semipermanent living structures, dining facilities, fuel storage and distribution facilities, ammunition supply points, 8 helicopter landing pads, and a 400-meter runway for the Mi-24 Hinds at FOB Ghazni. Once the JFUB packets were prepared and approved, they were sent to the CJTF-101 G-8 for funding and then to the Bagram Air Base contracting office to be awarded.

Although most of the facilities were constructed by the 62d Engineer Battalion and the U.S. Navy Seabees, the electrical and heating, ventilation, and air conditioning (HVAC) work was awarded to KBR through the Logistics Civil Augmentation Program (LOGCAP). The LOGCAP process caused the construction projects to be delayed by about 2 months while the funding issues were readdressed and packets were resubmitted for the power and HVAC installation.

To mitigate the construction delays, Force Provider dining facilities were operated by KBR at FOBs Ghazni and Warrior and an initial operating capability landing strip was laid with gravel. To ease the burden of constructing additional living facilities at FOB Ghazni, 90 living containers were flown in from Poland and assembled on site. Two power generators from FOB Sharana were also transported to FOB Ghazni to pro-

vide Task Force White Eagle's tactical operations center and living containers with 220-volt power.

U.S. and Polish Collaboration

While the construction projects were ongoing, U.S. and Polish personnel were busy with parallel planning for the battlespace transfer. Site surveys conducted with the planning team included both U.S. and Polish planners and the staffs of both Combined Task Force Currahee and Task Force Red Currahee.

After conducting surveys of all of the sites, planners determined that the Polish soldiers would assume responsibility for base operations, oversight of the installation, and the theater-provided equipment that belonged to the FOBs in the area. This would be the first time that a U.S. facility would be fully occupied by a coalition partner with base operations responsibility.

To make this legal, a Polish liaison team had to be formed. Fortunately for CJTF-101, the Polish mission in Iraq was ending and their liaison team was due to redeploy. The Polish liaison team, or operational military liaison team (OMLT), was reassigned to Afghanistan and quickly went to work signing for the theater-provided equipment and installation property. The OMLT also assumed responsibility for managing the FOBs' local support contacts.

Sustaining the Polish Force

The Polish National Support Element (NSE), originally located at FOB Sharana, was moved to Bagram Air Base because of the NSE's increased capabilities and distribution network. Before the battlespace realignment, Task Force White Eagle was supported by both the Polish NSE and the 801st Brigade Support Battalion (BSB). After the battlefield realignment, no Task Force Red Currahee Soldiers would remain in Ghazni Province. Because of that, the 801st BSB would no longer be required to provide logistics support to forces operating in that area.

A new sustainment system was developed to allow Task Force White Eagle to support itself with some assistance from the 101st Sustainment Brigade. The Polish NSE, the 801st BSB, the 101st Sustainment Brigade, and CJTF-101 signed a memorandum of understanding that outlined the support responsibilities of all the parties and the financial management actions that needed to be accomplished on a monthly basis.

Bagram Air Base serves as the hub for Polish logistics. CENTCOM established a monthly air bridge to move coalition partners' air cargo on U.S. airframes at no cost to the coalition partners. Essential Polish supplies are flown into Bagram and then pushed out by Polish convoys to FOB Ghazni, where they are further broken down and distributed to their final locations.

Polish ammunition shipments are coordinated among the Polish Land Forces Command in Poland, CENTCOM, and CJTF-101. After being notified that Polish ammunition is departing Poland, the Polish NSE must coordinate with the CJTF-101 joint transportation officer to schedule immediate follow-on air transport via C-130 Hercules to FOB Sharana. From FOB Sharana, the ammunition is trucked to FOBs Ghazni and Warrior.

Bagram Air Base is also the personnel hub for Polish reception, staging, onward movement, and integration, with all incoming and outgoing Polish forces flying through Manas Air Base, Kyrgyzstan. The Polish aviation detachment, using both their organic Mi-17s and CJTF-101 rotary-wing assets, move the Polish relief-in-place/transfer-of-authority (RIP/TOA) forces to FOB Sharana, where they are flown by C-130 aircraft to Bagram. This process simultaneously works in reverse when deploying RIP/TOA forces into the country. After arriving at Bagram, the Polish soldiers are flown to Sharana by C-130 and then moved onward by the Polish and CJTF-101 rotary-wing assets to their final destination.

Task Force White Eagle assumed control of the Ghazni battlespace and became a direct reporting unit to CJTF-101 on 30 October 2008. In addition to the logistics and engineering planning efforts that went into this successful mission, other planning factors had to be considered, including coordinating the transfer of fires and effects assets, force protection and FOB security assets, provincial reconstruction teams, agriculture development teams, base operations support integrated services, and intelligence, surveillance, and reconnaissance assets.

All planners played a crucial role in planning and executing the increase of Polish forces and the realignment of the battlespace. The combined planning sessions that brought together all parties involved in the mission were instrumental in its success. Through planning conferences, issues were raised and discussed and decisions were made on how to mitigate problems. Since its assumption of the Ghazni battlespace, Task Force White Eagle has continued to grow in size and its logistics enablers continue to support the fight.

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International and Joint Logistics Support: Exercise Talisman Saber

BY LIEUTENANT COLONEL WILLIAM C. JOHNSON, JR.

Talisman Saber, a joint exercise held off the north-eastern shores of Australia, is Australia's largest biennial training exercise with forces from U.S. Pacific Command (PACOM). The exercise merges two full-spectrum events, exercises Tandem Thrust and Crocodile, to enable the forces to meet Australian and U.S. training objectives in a sophisticated warfighting environment and to reinforce the crucial cooperative strategic relationship between the countries. The primary focus of Talisman Saber is to exercise the headquarters element of the principal joint task force (JTF) for PACOM.

Talisman Saber 2009 (TS09), which concluded on 25 July 2009 after 13 days of maneuvers, enabled 24,500 personnel with 75 ships and 150 aircraft to practice their operational warfighting capabilities without any logistics shortfalls.

Planning

The Marine Corps Forces Pacific (MARFORPAC) and the U.S. Navy's 7th Fleet alternate responsibility as the lead planning agency and blue force command each exercise cycle. The executive agent for TS09 was MARFORPAC, with the III Marine Expeditionary Force

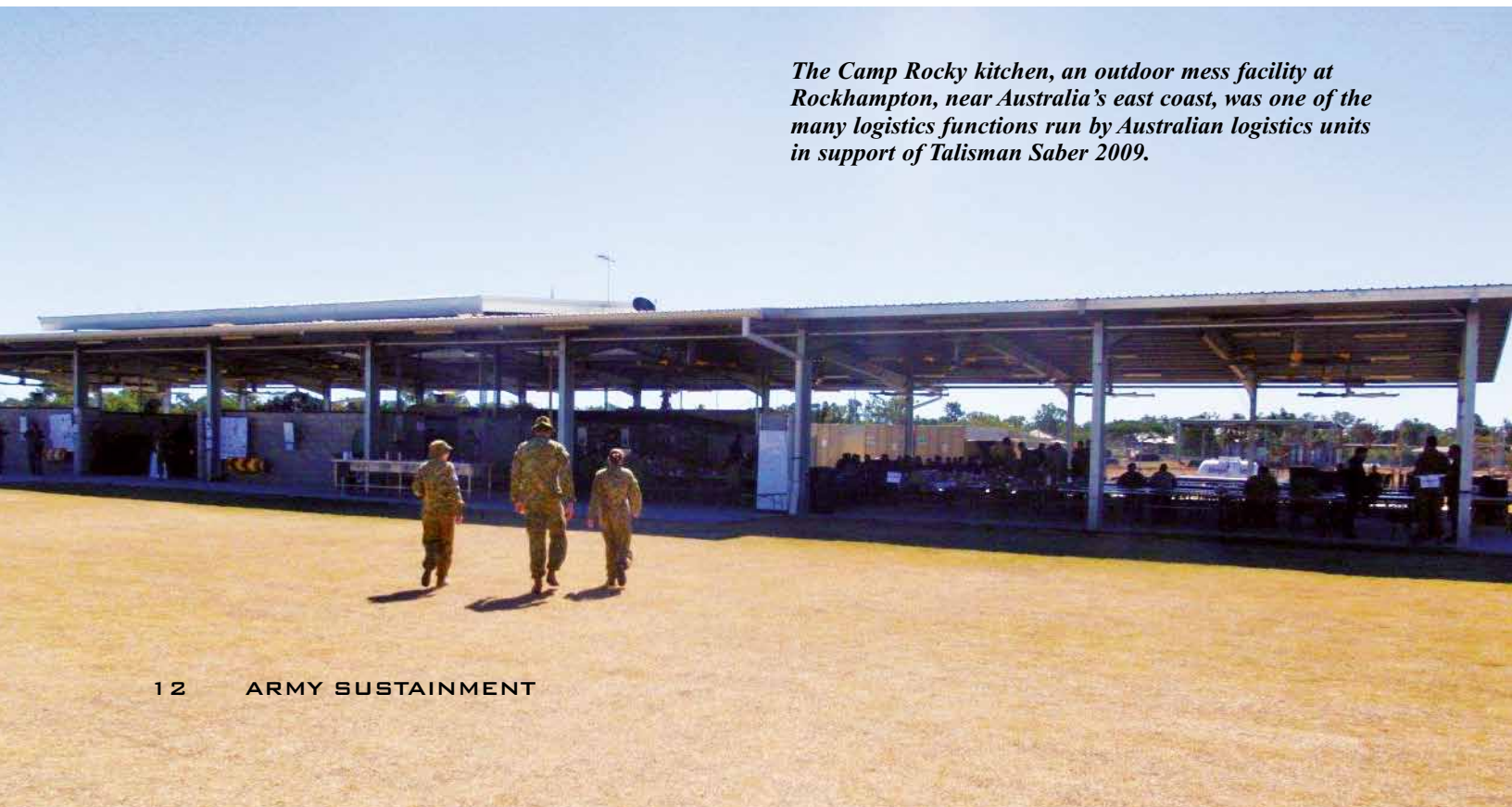
functioning as the combined task force for certification of the JTF headquarters. Australia's Joint Logistics Command (JLC), Headquarters Joint Operations Command, and 17th Combat Service Support Brigade served as the lead logistics agencies responsible for providing coordinated support to all U.S. and Australian force sustainment operations.

Cooperative defense logistics support agreements and acquisition and cross-servicing agreements (ACSAs) provided the guidelines for logistics support and proved to be effectively understood and implemented by both nations.

Providing Support

JLC used the national agreements to plan, coordinate, synchronize, and monitor the delivery of nationally integrated base support effects (joint logistics provided by U.S. and Australian force elements from both nations' Marine Corps, Navy, and Air Force) to ensure TS09 met the exercise directives. This overarching support from the national support base led to the coordinated delivery of efficient and effective logistics that allowed exercise participants to train, fight, and win in today's multinational joint strategic environment.

The Camp Rocky kitchen, an outdoor mess facility at Rockhampton, near Australia's east coast, was one of the many logistics functions run by Australian logistics units in support of Talisman Saber 2009.





The supply room of the 9th Force Support Battalion of the Australian Army operated this Q-store (quartermaster store) at Camp Rocky that supported the Combined Forces Logistical Component (CFLOGC) during Talisman Saber 2009. CFLOGC included both U.S. and Australian Soldiers.

The command, in concert with the 17th Combat Service Support Brigade and other logistics organizations, provided world-class national and regional sustainment to the exercise with no major shortfalls.

The 17th Combat Service Support Brigade provided general sustainment support to participating U.S. forces, including road transportation, distribution support, fuel and food supply, explosive ordnance disposal services, terminal services at air and sea ports, local contracting, health support, water transport, amphibious beach team support, air dispatch, and vehicle recovery.

During three planning conferences conducted over the course of the 20 months preceding TS09, Australian Defence Force logistics planners used ACSAs to ensure that the right goods and services were delivered in the

right amounts to the right locations. The ACSA process provides a relatively simple method with the greatest flexibility to satisfy a wide range of logistics requirements that are specified by treaty and are legally binding by international law.

Ninety-one mutual logistic support requests (MLSRs) valuing a total of more than \$5 million were processed during the exercise. JLC provided life support facilities, accommodations, food service, rental cars, and other unit-level supplies through 44 MLSRs valued at more than \$2.8 million. The following are just some examples of support provided by JLC business units: 115,000 fresh rations (valued at \$1.5 million), 445 tents with extensions, 2,035 floorboards, 1,300 sleeping bags, 1,680 wool blankets, 3,400 stretchers, 644 tables, 1,500 insect nets, and 30,960 combat rations.

Australia's 1st Health Support Battalion ran this medical facility (in the Shoalwater Bay Training Area) that supported both U.S. and Australian forces in a tactical environment during Talisman Saber 2009.



TS09 was a complex, large-scale event that required detailed logistics planning involving many joint, multinational, and interagency logistics organizations and other logistics units within the Australian Defence Force. JLC planners have captured valuable lessons learned from TS09 and now have the foundation to start planning Talisman Saber 2011 with the U.S. Navy's 7th Fleet from Hawaii.

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The 6th Medical Logistics Management Center

BY MAJOR EDGAR G. ARROYO

An Army Medical Command unit links the sustainment base and the Army Medical Department with the medical logistics requirements of the deployed force.

On 13 October 2000, the Army activated the 6th Medical Logistics Management Center (MLMC), an organization designed to conduct class VIII (medical materiel) management in a manner similar to an Army logistics materiel management center in a theater sustainment command. The force design followed the total Army analysis tenet of providing support to two major theaters of war simultaneously.

The 6th MLMC's primary mission is to centrally manage medical materiel, coordinate distribution, and manage medical equipment maintenance. It accomplishes this mission by providing base operations at Fort Detrick, Maryland, and by deploying a team of 13 people with different medical logistics management capabilities to the supported combatant command during combat operations.

The transition of Army logistics after 9/11, the integration of globalized automated management systems, and a new total Army analysis for simultaneously supporting three contingencies prompted the 6th MLMC's staff to review the center's capabilities and consider further modifying its force design. The 6th MLMC staff made suggestions and staffed changes in four areas: transformation, deployment capabilities, partnerships, and strategic management.

Transformation

The 6th MLMC's commander established a working group that suggested that the unit realign its support teams so that it could stand up at a moment's notice and support operations other than Operations Enduring Freedom and Iraqi Freedom. This initiative required immediate changes to the force design, which resulted in modification table of organization and equipment changes that added an Active Army and Reserve component team to the authorized capabilities.

The commander's working group also recommended that the 6th MLMC establish new standing operating procedures to ensure that it could provide capabilities, such as automation support, contract support, dedicated strategic air support, and in-transit visibility, from the sustainment base to the deployed force. Lastly, the

staff recommended that the information management section of the support operations cell have a more robust allocation of personnel and equipment to enable the integration of automated systems.

The outcome of these recommendations was a ready support team that could deploy globally and a base operation with a framework that adapted to contingency operations abroad. The MLMC has become the critical link between operational medical logistics units and strategic capabilities managed by the Army Medical Command and the Defense Logistics Agency. The transformation includes the ability to—

- Operate in a split-based mode.
- Maintain the MLMC base in the continental United States.
- Deploy MLMC teams into the area of operations. (Medical logistics teams plug into a theater sustainment command, expeditionary sustainment command [ESC], or the Coalition Forces Land Component Command J-4.)
- Provide management of class VIII and medical equipment maintenance.
- Link strategic-level logistics to operational-level logistics.
- Link class VIII management to intratheater distribution.
- Provide information management functions in support of single integrated medical logistics management.

Deployment Capabilities

The working group also recommended standing up, training, and deploying an early-entry support team to a contingency operation in one of the six geographical commands. To accomplish this, the commander decreased the deployed footprint in the U.S. Central Command area of operations from 13 personnel to 7.

The 6th MLMC staff reviewed the deployable capabilities of the ESC and recommended that a medical logistics plug-in would be the solution to integrating medical logistics with the ESC's support operations cell. This medical logistics plug-in would continue to be integrated with the theater's medical command-

and-control structure. The staff recommended that the medical logistics plug-in develop an interface with the distribution operations center and the class I through class IX materiel managers of the ESC.

In response to these recommendations, the 6th MLMC established an early-entry support team in the U.S. Pacific Command, under U.S. Forces Korea (USFK) and its Joint Forces Sustainment Component Command. The team colocated with the 19th ESC and postured itself for coordination with the 18th Medical Command, 16th Medical Logistics Battalion, Eighth Army Surgeon's Office, USFK Surgeon's Office, 168th Multifunctional Medical Battalion, and sister service medical planners.

The newly established medical logistics cell coordinated transportation, interfaced with the Defense Logistics Agency for contracting support, and coordinated with medical maintenance activities. The exercise was such a success that the 19th ESC commander validated the medical logistics plug-in as a critical function for the Joint Forces Sustainment Component Command. The early-entry support team renewed its participation in the U.S. Pacific Command exercise in March 2007. The success of the exercise allowed the 6th MLMC to continue its outward focus and engage with other combatant commands.

The 6th MLMC staff began to participate in U.S. Northern Command medical logistics planning summits that led to the employment of the support team in Ardent Sentry 2007 and the national-level exercise in 2008. The 6th MLMC engaged in the U.S. Africa Command and U.S. Southern Command medical logistics summits. The training and combatant command engagement strategy proved to be successful when the 6th MLMC received an executive order to deploy and execute early-entry support team operations in support of the U.S. Northern Command's hurricane relief. The team's efforts in integrating and enabling medical logistics operations validated the capabilities of the 6th MLMC.

Partnerships

Besides a combatant command engagement strategy, the 6th MLMC commander and his staff suggested that partnerships play a major role in setting the stage for an efficient end-to-end supply chain management process. The 6th MLMC began by incorporating the Defense Supply Center Philadelphia (DSCP) troop support planners. A number of meetings and exchanges of information with key partners enhanced logistics integration.

Some of the key players in facilitating this process were DSCP, the U.S. Army Medical Research and Materiel Command, the U.S. Army Medical Materiel Agency (USAMMA), U.S. Army Medical Materiel Command-Europe, combatant command medical logistics planners, the U.S. Army Medical Informa-

tion Technological Center, Army Medical Command, Defense Medical Logistics Standard Support project managers, and the Medical Communications for Combat Casualty Care product manager. These partnerships brought together stakeholders to achieve a common goal. The 6th MLMC has been successful in combining efforts with the different partners to execute real-world contingency operations.

THE TEAM'S EFFORTS IN
INTEGRATING AND ENABLING
MEDICAL LOGISTICS OPERATIONS
VALIDATED THE CAPABILITIES
OF THE 6TH MLMC.

Strategic Management

The 6th MLMC developed its first strategy map to document its way ahead in a continuous process, which becomes a long-range plan. The map focused on the main objectives of end-to-end supply chain management. The 6th MLMC plans to have four forward support teams in its future force design. It also has transitioned to the Defense Medical Logistics Center (DMLC), where it is colocated with Air Force, Navy, USAMMA, and the DSCP troop support planners in the DMLC Joint Operations Center. The transformation of the center comes at a time when the Army must focus on worldwide logistics, joint support, and relevant and efficient materiel management.

The development of the 6th MLMC has focused on supporting combatant command medical logistics planners. The unit is committed to assisting the staff of each combatant command in developing medical logistics. Its long-term strategy is to provide sister service integration, supply chain analytics, the medical logistics common operational picture, and readiness charts.

As the base transitions into the new DMLC, its focus is on having a common language for support capability, information systems, and planning. The 6th MLMC is preparing to become a fully integrated and transformed unit that provides the key functions required for today's global challenges.

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The Corps Logistics Planning and Decision Cycle

BY LIEUTENANT COLONEL MILLICEN A. DILL

Multi-National Corps-Iraq (MNC-I) is the tactical unit responsible for command and control of operations in Iraq. When I became the chief of plans for MNC-I C-4, I encountered a cacophony of various agendas, timelines, and priorities. In order to accomplish my job as a logistics staff officer successfully, several questions needed to be answered: What were the real requirements, and how would I facilitate moving a corps headquarters forward without becoming an obstacle in the operational environment? More importantly, how do I ensure synchronization between theater logistics agencies and the corps? What immediate steps would I need to take to meet the planning horizon requirements and the commander's intent for sustainment and to prioritize sustainment lines of effort for the future?

I mentally went through the steps I needed to take to organize the chaos. First, determine the battlefield relationships—who were the theater multipliers and what were their roles. Second, identify MNC-I's objectives and goals and how sustainment worked with operational objectives to meet the commander's intent. Third, determine internal and external battle rhythms in order to understand when to raise sustainment issues, questions, and concerns. Conveying a vital piece of information to the wrong staff member or in the wrong venue made it unactionable and irrelevant, so I would have to understand all the players and their roles.

Adding to the complexity of decisionmaking was the ongoing paradigm shift in Operation Iraqi Freedom (OIF) from a kinetic operational environment, focused on counterinsurgency, to a nonkinetic one focused on nation-building and transitioning responsibilities to the Government of Iraq. By early 2008, after redeploying the “surge” brigades, we began the move toward the “terminal” phase of the war in terms of logistics support. From mainly pushing full trucks of materiel into Iraq, we transitioned to pushing full trucks of materiel out of Iraq.

As the paradigm slowly shifted, the question became how to coordinate all of the required players on the battlefield while maintaining support to the warfighter without provoking anxiety. This was not just a matter of changing phases represented by distinct segments depicted in an operation order; it was a matter of changing a mindset. Staff at all levels, from tactical to strategic, had to understand that the policies

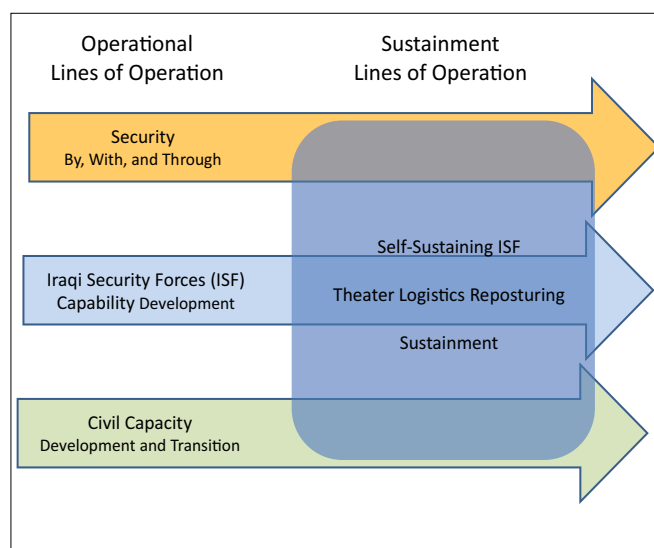
and procedures for the operation's sustainment phase were the opposite of the policies and procedures needed for the terminal phase.

Understand Operational Requirements

Because Iraq has so many “wicked” problem sets, it was difficult for a newly formed staff to focus on its priority. However, the MNC-I commander made his lines of operation the focus of everything that the staff did, in essence narrowing the staff's field of vision so that they could focus their efforts to meet his intent.

One of the major differences between operations and logistics in this environment is that all the tools for operations are inside the country under one central command structure, while most of the tools needed for sustainment are outside the country and in several layers of different commands. The operational mission set is one large set of problems, while the sustainment mission set is another large set of problems. To define the highest priority, the sustainers had to separate the sustainment problem set from the operational problem set, redefine operations and objectives at the theater level, and then pull the problem sets back together.

It was easier to look at the process as a set of overlays. The operational overlay defined the operational mission set or lines of operation, while the sustainment overlay defined the sustainment mission set or lines of operation.



Determine Sustainment Requirements

The three operational lines of operation were security, Iraqi Security Forces (ISF) capability, and civil capacity. The sustainment lines of operation became creating a self-sustaining ISF, reposturing theater logistics, and providing sustainment. Based on strategic planning and direction, my unit understood before it deployed that its mission had taken a dramatic turn from sustainment to the terminal phase of the operation and that it would be responsible for setting the stage for the next phase of OIF.

One of our objectives early on was theater logistics reposturing. We started simply by determining what was truly excess (from all classes of supply) and then quantifying that excess in order to reallocate it to another location in Iraq or ship it to a receiving depot. As the lead operational headquarters, it was our responsibility to develop and validate policies and procedures for retrograde and to ensure that we were pushing as hard as possible to return all unnecessary equipment and commodities without impacting operations. This was a dramatic shift from front-haul efficiencies to enhancing back-haul efficiencies.

Priorities

Once the terminal phase began, it was important to take a critical look at all equipment that came into country and put it through an intensive process of equipment comparisons, timelines, and operational need to stop the flow of equipment into country and start to balance the “real” need to the “perceived” need.

On the C-4 operations side, the staff started drilling down into their commodities while determining performance measures and addressing the question, what can we get rid of now? Examples of excess were ammunition and equipment. Much of both was continuing to come into country, and some was no longer needed.

For ammunition, the C-4 staff found that some policies in theater were not synchronized between Kuwait and Iraq. Those procedures had been created for the sustainment phase and had worked very well. However, once U.S. forces began orienting toward the terminal phase, all procedures across the theater had to be revaluated. We had to develop procedures that reduced the amount of ammunition coming north across the border from Kuwait and increased the number of trucks heading south. In other words, we had to reverse the normal way of thinking.

That caused a theater-wide change of priorities, procedures, and processes. Even routine things like deployments and redeployments became extremely complicated.

Planning Versus Operations

The C-4 plans section was beefed up to allow for the coverage of the planning horizons within the operational

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environment. We still had to support C-3 future operations and C-5 future plans. Both C-3 and C-5 focused predominantly on the operational environment and were not oriented toward retrograde. We had to work a viable plan and then convince the other staff elements that we were truly in the terminal phase of the operation and that logistics was going to be the linchpin for that phase. We knew the time was short. Once retrograde planning became accepted, the sustainment mission would again be propelled by the operational environment, so for feasibility, we needed to work out a viable plan regardless of the environment.

Changing a way of thinking at the theater level—across so many commands—and changing other staffs’ basic procedures could cause more negative effects than positive. The C-4 staff planned to use most of the same procedures and venues that were already in place in order to reduce the amount of chaos inflicted on the theater’s sustainment operations.

Identify Theater Multipliers

We needed to identify all the players in theater and their roles in supporting operations. MNF-I helps maintain security in Iraq by preventing and deterring terrorism and protecting the territory of the country. The goal of MNF-I is to help the Iraqi people complete their political transition, permit the United Nations and the international community to facilitate Iraq’s reconstruction by forming a partnership between the Government of Iraq and MNF-I, and ensure that the two coordinate.

The Army Central Command (ARCENT) headquarters in Kuwait provides command and control for all U.S. Army forces entering the theater of operations. The 1st Theater Sustainment Command provides joint command and control of logistics and select forces supporting combat operations across the full spectrum of conflict and supports redeployment of rotating forces and sustainment of operating forces in the U.S. Central Command (CENTCOM) area of responsibility. The CENTCOM Deployment Distribution Operations Center’s mission is to establish a single entity to integrate total force and materiel

Reference Number (in red on charts)	Operations	Sustainment
1	The planning efforts across all planning horizons and listed their priority of effort	The operational priority of effort, the sustainment plans officer, and the corresponding sustainment priorities.
2	The commanding general's top 10	
3	Operational events timeline, which depicts all events which could impact the operational environment	Sustainment events timeline, which depicts all events that could impact the operational environment
4	The Commander's Communication Strategy, which listed the current public affairs office topics and the responses	
5	Corps priorities listing the resource allocation for all kinetic and nonkinetic operations	Corps priorities listing the resource allocation for all kinetic and non-kinetic operations
6	Operational lines of operation	Operational and sustainment lines of operations
7		Deployments and redeployments

The charts (above and at right) show the operational tools and the parallel sustainment tools used to keep pace with the changing environment. The corps commander's priorities were communicated weekly through a one-page synchronization tool that nested with the corps priority synchronization chart, describing planning and resource allocation across all planning horizons (above). The "Sustainment Main Effort" chart was the sustainment counterpart of the one-page synchronization tool. The chart titled "Sustainment Planning Efforts" outlined which logistics planner was responsible for which operational plan. The red numbers correspond with the numbers in the chart above.

flow from the port of debarkation to a designated in-theater destination. The Army Materiel Command provides acquisition support and logistics.

Nesting Theater Sustainment

During my first OIF deployment, Iraq had two distinct layers—operational and logistics—that had their own distinct processes and procedures, characteristics, functions, roles, and timelines. Operations and logistics were still separated fundamentally. The distance between the two layers increased or decreased depending on how diverse the missions were. For example, if the warfighters were still conducting counterinsurgency operations while the logisticians performed retrograde, the operator and the sustainer diverged. The sustainer set the stage for the operator to orient toward retrograde operations, at which point the operator and the sustainer converged.

The sustainer and the operator constantly diverge and converge toward the same objectives, just on different timelines. The hardest part for a sustainer is

determining when to proactively diverge ahead of the operator in order to eventually converge again in order to keep pace.

We, in C-4, were about to diverge again in order to ensure that the operators would succeed. One of the biggest issues we found was planning deployments and redeployments. So we had to push the sustainment planning timeline out 4 to 6 months. If we reduced what came into country and increased what went out of country using the normal processes and procedures that were already in place, we could start to execute before we were actually told to, giving the sustainment community a headstart to drawing down.

The process would start slowly and methodically. We could start by answering questions such as where do we ship equipment, how do we do reset, and what do we leave behind? We knew that the answers to these questions were linked to cost.

The C-4 staff could not begin to answer questions for the Department of the Army level or higher, but the questions had to be asked to get an answer,

Sustainment Main Effort		
Operational Lines of Operation	Sustainment Lines of Operation	3 Sustainment Planning Events (May have included the operational events, but in some cases not. The sustainment events included all sustainment joint planning teams theater-wide video teleconferences, and major deployments/redeployments)
(Laid out side by side to ensure unity and to flag any changes)		
5	Corps Priorities	
(Resource allocation—C-4 added additional lines as we dealt with contracting resources)		
Deployments/Redeployments Timeline (Linear depiction of large unit deployments/redeployments)		

Corps Main Effort		
Corps Decisive Operation		
Planning Efforts (Quick snap-shot of all planning horizons showing priority) 1	Commanding General's Top 10 2	Events Timeline (Quick snapshot of calendar events that could impact the operational environment) 3
Commander's Communication Strategy (Current public affairs office topics and answers) 4	Lines of Operations (Included any changes to objectives) 6	
Corps Priorities (Resource allocation for kinetic and nonkinetic operations) 5		

1

Sustainment Planning Efforts

Future Plans				
Action Officer and Primary Sustainment Operation Focus				
Planning Effort	Operational Planner	Operational Priority	Sustainment Planner	Sustainment Priority
Plans (Kinetic and Nonkinetic)				
Action Officer and Primary Sustainment Operation Focus				
Planning Effort	Operational Planner	Operational Priority	Sustainment Planner	Sustainment Priority
Theater Logistics Reposturing				
Action Officer and Primary Sustainment Operation Focus				
Planning Effort	Operational Planner	Operational Priority	Sustainment Planner	Sustainment Priority
Iraqi Security Forces Self-Sustainment				
Action Officer and Primary Sustainment Operation Focus				
Planning Effort	Operational Planner	Operational Priority	Sustainment Planner	Sustainment Priority

and they had to be answered before orders could be generated. MNF-I became the C-4's conduit for communicating with those higher levels, trying to get answers on processes.

The C-4's tasks were to address all the issues that it could, decide if executing sustainment would affect the operational community, and execute, if possible, while coordinating with the theater to ensure that it did not inadvertently upset any theater processes and procedures. The C-4 had to incorporate into a single planning battle rhythm for drawdown all of the ground logistics elements that had been performing at a steady state for so long, filling their own unique requirements.

When talking to the division logistics planners and the expeditionary sustainment command (ESC)

planners, we found no venue for discussing logistics issues at the corps level. Therefore, MNC-I C-4 created a logistics planning process, starting with the operational synchronization forums provided by C-3 operations, C-3/5 future operations and plans, and C-5 plans. Their briefings and planning objectives were first introduced into a corps internal logistics planning meeting using Adobe Breeze (a computer-driven collaborative capability). The C-4 incorporated the major players within MNC-I's logistics footprint, including—

- The Multi-National Division/Force (MND/F) logistics planners.
- The ESC planners.
- The Army field support brigade (AFSB) supporting units in the MNC-I area.

This drove the development of the decision cycle for logistics. MNC-I C-4 had to be the nucleus of logistics throughout the theater and truly drive the train.

Introducing a new forum takes time. How would the C-4 form a logistics planning venue with appropriate-level information (both input and output) that was useful, well-received, and gained and retained the appropriate level of participation? I continued to explain to my team that active participation was based on trust. Each level of command found its unique way of getting feedback to us, through formal or informal means. Logistics planning in the past had been done at the corps level in a very fast-paced vacuum. With the looming operation of retrograde ahead, the vacuum needed to open up. We needed the MND/F, ESC, and

PRIORITIES WERE VALIDATED WEEKLY THROUGH A ONE-PAGE C-4 SUSTAINMENT SYNCHRONIZATION TOOL THAT NESTED IN MNC-I'S PRIORITY SYNCHRONIZATION CHART DESCRIBING PLANNING AND RESOURCE ALLOCATION ACROSS ALL PLANNING HORIZONS.

AFSB to confirm feasibility and allow parallel planning at each level of command to occur. The question of reachback had to be answered once the questions of feasibility and “how bad” were answered.

Once the C-4 was able to provide the theater's sustainment commands with information that it knew would affect their internal processes, it began to understand how long it would take to get answers concerning feasibility and reachback. Deployments and redeployments guided the process to start retrograde. The C-4 staff extended the timelines for planning for retrograde and synchronizing base closures and existing operational planning efforts. Base closures affected planning because of the number of trucks required to shut down a base.

To make the process more efficient, we determined what products from the base closures could go directly to their destinations instead of to a redistribution point. We found that bringing all the players together to address the problems of base closures increased the number and awareness of problems associated with base closures and the ability to get answers from a much higher level than MNC-I.

The problems had been present, but each sustainment command was trying to handle the problems on its own. Once the commands got together to discuss the issues and put a system in place that included base closure, we found that we had common problems and discussed how to handle them, which sometimes included changing processes and procedures at a much higher level.

Reintegrating Into MNC-I Operations

While the C-4 was making fundamental changes across the theater, it needed to ensure that it was still fulfilling the requirements for all three sustainment lines of operations: self-sustaining ISF, theater logistics reposturing, and sustainment. At the C-4 level, the theater logistics reposturing line of operation could make or break the theater.

Validating priorities across the theater and synchronizing current and future plans and operations were critical. Priorities were validated weekly through a one-page C-4 sustainment synchronization tool that nested in MNC-I's priority synchronization chart describing planning and resource allocation across all planning horizons. For C-4, the microlevel was a 180-day sustainment synchronization calendar developed from the 180-day operations synchronization calendar; this calendar incorporated timelines

for base closures, deployments, and redeployments since deployments and redeployments were the catalysts for determining how much came in and out of theater.

The highest priority was to stay tied closely to the operations community. Every effort toward reposturing was a necessity, but pushing too hard or too quickly and undermining the operational mission by upsetting the sustainment line of operation would affect the MNC-I commander and his mission. We had to balance the push for change to meet the reposturing effort while ensuring that operations were supported. Then we had to figure out what was not a priority. Reposturing efforts were oriented toward lower MNC-I priorities within Iraq, and sustainment efforts were oriented toward higher MNC-I priorities. When looking at effectiveness versus efficiency, the sustainment and self-sustaining ISF efforts focused on effectiveness while the reposturing efforts focused on efficiency.

Plans for Operations Handoff

A 180-day synchronization calendar was developed to cover ISF operations, deployments and redeployments, infrastructure timelines, and political objectives. This calendar was a one-page snapshot by month that categorized major operational and strategic objectives. Because each operation had so many tasks, two pages per month were added for sustainment, incorporating timelines for base closure and deployments and redeployments, to augment the operation's single page, which outlined the “four Rs” (retrograde, reposture, redistribution, and redeployment).

Because each problem set had its own timeline for handoff from planning to operations, we had to create new sustainment processes that included handoff timelines. Since transportation was our limiting factor, deployments and redeployments, base closures, and normal sustainment became our benchmarks. We used the four Rs to develop the equations used to analyze the initial requirements for transportation and to standardize what theater multipliers were needed.

The MNC-I staff established terminology for telling external organizations what help it needed. The following terms are not in accordance with any known publication because the requirements were determined specifically for drawdown in Iraq and oriented on theater-level sustainment requirements.

“Retrograde” was defined as “no longer needed materiel and headed out of theater,” requiring theater assistance for both logistics and transportation.

The terms “reposture” and “redistribution” were both used to indicate that an element within Iraq was moving to another location within Iraq. (Element is a nondoctrinal term for a unit or piece of equipment.) The AFSB would have to look at the new requirements to see if they could be met with the capabilities in the new area or if there was an overlap in capability, which meant excess equipment. The difference had to do with the size of the element. Were we moving a few pieces that could be moved as a normal transportation movement release? Or were we moving a large brigade combat team (BCT) that needed additional transportation and logistics assets to accomplish the mission as quickly and efficiently as possible?

Redistribution usually meant equipment shifted between BCTs, which involved property book realignments that would increase the timeline. Reposture had a completely different set of requirements, usually involving base closures. Once these terms and their informal connotations became common knowledge, they provided external organizations with the ability to plan and hasten decisions on feasibility and timelines without causing friction across the theater.

“Operationalizing logistics” became another common term. It basically meant taking the empirical formulas of logistics and putting them into the “so what” context for the operator. Logistics is hard; it means using math, sometimes at the graduate level. An operator does not care how much math is required or how the task will be achieved. The operator only cares about the bottom line—the ability to accomplish the mission.

The final step to operationalizing logistics is working logistics with the mindset of an operator. Logisticians mostly come up with the necessary math to answer their basic questions, but few determine how that basic question will affect all other basic logistics questions and processes and procedures. When we put all the math problems together to answer all the wicked problems that have been asked individually, how does executing the answer for one problem affect all the intertwining problems on the battlefield? The answer to that question becomes the real answer to operationalizing logistics.

The staff functions, capabilities, and procedures to accomplish the logistics mission differ greatly among units. Some of the lessons learned by MNC-I C-4 were as follows—

- One headquarters needs to be central in facilitating all supporting efforts in a multilayered command system. Defining a logistics framework to support that operational headquarters and unifying all

supporting players is a tough job and is based on relationships, socialization, and command emphasis.

- A staff officer needs to understand where and how to affect change. Change does not happen as quickly at the corps level as it does in the brigade.
- All parties need to reevaluate the value of video teleconferences, meetings, and so forth. These questions must be answered: What is the purpose? What is the end state? Who does this affect? Who really needs to know this information? Is this information informative, or is it just information? Who is the audience? What is the central message that you want to convey?
- Each supporting logistics headquarters needs concurrent planning efforts for its intrinsic mission in order to facilitate the main effort’s planning horizons. This is done by laying out how information will flow between each headquarters and maximizing the venues to their fullest capacity.
- Socializing ideas across a theater with so many headquarters takes time for all players to process and begin execution. The process should be started early by anticipating the requirement and trying to help the rest of the theater to understand and be prepared for the inevitable decision at the staff officer level.
- Try not to be overwhelmed by the sheer volume of information. Like anything else, cut it into bite-sized pieces, prioritize the information, and address it one piece at a time.
- Determine what information is really needed, and figure out who really needs to act on that information or who really needs to know.
- Figure out what is important and what is not. Each headquarters has its unique buttons. Be sensitive to them, even though you may not understand the ramifications. If you understand how each item affects the headquarters and how it plays into the overall theater synchronization process, then the system will work for you when you need it to work.

While the logistics decisionmaking cycle, or execution cycle, is still in its infancy, as well as the logistics planning cycle, the emphasis and need for one combined theater will be inevitable as reposturing increases in speed. Operationalizing logistics, assigning responsibility for actions, and more importantly, having everyone take an active role in the future will be the cornerstone for meeting the Presidential draw-down timeline.

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A New Approach to Class IX Control

BY CHIEF WARRANT OFFICER 4 MARTIN D. WEBB

An organizational culture exists within Army units that expects maintenance and supply personnel to anticipate operational requirements. This culture extends from food service personnel to maintenance managers. Consequently, a “just-in-case” requisitioning mentality prevails. Many maintenance and supply managers order nearly anything with a national stock number (NSN) just in case their unit needs it in the future, and this practice is costing the Army millions in transportation and supply expenditures.

Army logistics systems quickly fill requests for class IX (repair parts) supplies from the field; however, I contend that Army logisticians can change the just-in-case requisitioning mentality by anticipating units’ class IX needs. This is comparable to performing market research in the civilian business sector to determine what the people want or need and how to get it to them.

Emulating Fortune 500 Companies

Fortune 500 companies do not let the store manager determine what to stock, and neither should the Army. Walmart, a Fortune 500 company since 1995, performs many of the same logistics functions as the Army supply system—contracting, transportation, distribution, warehouse storage, and retail-level supply. One main difference between the Army and Walmart is that Walmart does not expect the store manager to determine what to stock. It uses full-spectrum supply-chain logistics systems, market analysis, stock control, and accounting procedures that minimize costs and maximize profits.

Standard Army Management Information Systems (STAMISs) and support agencies, such as the Logistics Support Activity, the Army Materiel Command, and the Defense Logistics Agency, have the tools to enable the Army to mirror a Fortune 500 company by providing warfighters with 80 to 90 percent of their operational and supply requirements. To resource warfighters for success, minimize costs, and maximize profits, the Logistics Support Activity should—

- Collect usage and fleet failure data.
- Determine the most essential fleet repair parts.
- Forecast the effects of anticipated changes in unit equipment or operating conditions.

In Army terms, these actions equate to increased readiness.

Shop Stock and Bench Stock Procedures

Let’s look at class IX supply procedures for units deployed in support of Operations Iraqi Freedom (OIF)

and Enduring Freedom. This will address the current logistics situation, in which the Army operates under a just-in-case requisitioning mentality with no perceived budget constraints.

Nearly every unit puts its motor sergeant or maintenance officer in the advance party to set up maintenance operations and to establish its class IX account at its supporting forward distribution point (formerly supply support activity). He quickly assesses the unit’s organic and theater-provided equipment density and starts ordering anything and everything that he *thinks* he *might* need to sustain the fleet. This includes engines, transmissions, transfers, differentials, radiators, generators, windows, brakes, calipers, water pumps, and so forth. Imagine all of those items plus many, many more for multiple fleets of vehicles for *every unit in theater*—just in case.

A field maintenance company has the added responsibility of providing pass-back maintenance support for armament, communications and electronics equipment, ground support equipment, and service and recovery to the brigade combat team. Therefore, it will have a second shop stock to support those shops.

High-visibility systems, such as the long-range advance scout surveillance system (LRAS-3), have field representatives who maintain and provide manufacturer-recommended parts, totaling over \$1 million, to keep those systems fully mission capable. And topping off the list of supplies is the “gee-wiz” stuff people order, like computers, plasma screen televisions, LCD [liquid-crystal display] monitors, plasma cutters, air compressors, knives, camelbacks, and every special tool and hand receipt shortage with an NSN.

Since the Standard Army Maintenance System-Enhanced (SAMS-E) automatically replenishes shop stock and bench stock items using 12-priority requisitions with no required delivery dates, units typically order the items they want to stock as an “offline” requisition using an 02 priority requisition with a required delivery date of 999, which indicates the need for expedited handling. Of course, ordering parts this way gets them in faster. Once the parts arrive, they are added to shop or bench stock for management.

So, we have units ordering everything they can think of for every fleet of equipment they support.

We have replenishment requisitions competing with not-mission-capable supply requisitions for both allocation and transportation. Moreover, we have units ordering every “cool-guy” NSN they can find. As you can see, we have a supply and maintenance

management problem of epic proportions that is straining the budget and the logistics systems.

System Flaws

The current shop stock and bench stock policy is a relatively simple way to reduce Army inventory cost. It is a decentralized system that allows units to stock the items that their demand history reveals they order most. To cut costs even further, the Army has reduced the maximum number of prescribed load list lines from 300 to 150.

For an Army that had not been required to support combat operations in 20 years (from Vietnam to the first Gulf War), these policies may have served us well. However, as I see it, this policy has some fundamental flaws. It is typically based on the 180-day demand history of a unit in a garrison environment and calculated against the unit's garrison fleet of equipment. Using the demand history from the past 180 days in garrison is not representative of our war-time operating tempo or mission requirements. The most significant shortcoming of the current shop stock and bench stock policy lies in its failure to incorporate forecasting. The policy does not take into consideration immediate changes in unit equipment density, upcoming deployments, seasonal requirements, or operational requirements.

Now that units are primarily using theater-provided equipment, quite often demand history is lost between incoming and outgoing units during the relief in place and transfer of authority processes. Coalition Forces Land Component Command policy prohibits the transfer of unit Department of Defense activity address codes from outgoing units to incoming units, and the home station demand histories are useless because they were calculated against a different fleet of equipment under different operational conditions. Some units are left with a robust stock to fall in on, and others are left with little or nothing, which forces the incoming unit to do just-in-case ordering.

The Army has no system or program that will maximize readiness and minimize logistics costs by telling a maintenance activity what it should stock based on its equipment density. The following recommendations are intended to help change this situation. I am certain that we have the technological ability and the STAMIS systems to support these initiatives.

Establish and Follow Budget Controls

The first thing the Army can do to get expenditures under control is to implement budget controls during extended combat operations. Units need to get away from the attitude that they can order anything with an NSN because there are no budget constraints or that spending does not matter because they are using Global War on Terrorism funds. I would not recommend establishing such controls in the first 6 to 12 months of an

operation (such as OIF I) but possibly during the subsequent 13 to 24 months (such as OIF II and beyond).

Many units are living and working on well-developed forward operating bases now and have achieved some degree of "normalcy" in their battle rhythm. Managing a budget is well within their capabilities, even while deployed.

Centralize Shop Stock Management

Another huge step toward reducing our maintenance and supply costs would be to make a commitment to manage logistics at the Army level. That equates to transitioning from decentralized shop stock and bench stock management systems to a centralized management system. However, the Army could, and probably should, manage these systems and many other logistics systems jointly with the other Department of Defense branches since they use many of the same pieces of equipment and logistics support agencies.

Enough data are available on each major end item to determine the exact items and quantities that each maintenance activity should stock. I recommend that the Logistics Support Activity provide the database for Army logistics management and use the data in Property Book Unit Supply Enhanced, which manages all unit property, to determine with a great deal of accuracy what property each unit has.

Let's say that the Army wants to focus its efforts on stocking the quantifiably correct parts for Department of the Army Pamphlet 700-138, Army Logistics

SHOP STOCK AND BENCH STOCK QUANTITIES MAY NEED TO CHANGE WHEN UNITS PREPARE FOR DEPLOYMENT, PREPARE FOR REDEPLOYMENT, OR MOVE FROM AN OVERSEAS LOCATION TO AN INSTALLATION IN THE CONTINENTAL UNITED STATES.

Readiness and Sustainability, and Master Maintenance Data File reportable items. The Army would identify all its reportable systems. Then it must analyze historical class IX requisitioning data from each project management team, the Army Materiel Command, and the Defense Logistics Agency to determine the most essential items required for maintaining each end item at the highest possible readiness level.

Next, the Army would quantify the optimal stockage requirements in the form of an algorithm or program for each unit in the Army, based on its equipment density and operational requirements. Then it would push that

shop stock and bench stock list down to the unit level and require the units to stock those exact items.

The key to sustaining success on this front is to actively manage this system to achieve the desired reduction in logistics costs and increased readiness levels. Shop stock and bench stock quantities may need to change when units prepare for deployment, prepare for redeployment, or move from an overseas location to an installation in the continental United States.

After the program is written, it should essentially be a continuous system that works nonstop to optimize readiness and reduce costs by monitoring changes in unit equipment density, forecasted seasonal or geographic changes, or operational changes in mission. Furthermore, by implementing an Army centralized shop stock and bench stock policy, we eliminate any ambiguity about how many lines of shop stock or bench stock a unit can have because we have created a tailor-made listing for every unit in the Army.

Put an End to Just-in-Case Ordering

Eradicating just-in-case ordering is going to be difficult to accomplish without first resourcing units with adequate shop stock and bench stock to support them. Once a maintenance operation has been sufficiently stocked, fewer 02-priority replenishment orders that compete with real 02-priority requisitions will be placed. Making any type of software change will not help. (A unit could just order 10 engines against a pair of night-vision goggles to get what it wanted.) To change the mindset and culture of our motor sergeants and maintenance officers, the Army should first resource them for success and then train them on the implications of their actions.

To reduce some of the temptations of units to order so much nice-to-have but unneeded stuff, the Army needs to have a serious talk with the Defense Logistics Agency. How or why a computer or plasma screen television got loaded into the FedLOG catalog as class

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THEM ON THE IMPLICATIONS OF THEIR ACTIONS.

Manage Authorized Stockage Lists

This same approach can also be applied to managing warehouse authorized stockage lists. The only difference is that when doing the computations, the programmer should consider the equipment that each customer unit is responsible for maintaining and the shop stock and bench stock items and density that the unit has been directed to stock. Ideally, we want to make sure that the warehouse can quickly replenish the unit's shop stock and bench stock.

Store Major Assemblies in Warehouses

I think that all major assemblies, such as engines and transmissions, should be stored in warehouses. The Army loses national-level visibility of these items when units stock them. I have seen units with stacks and stacks of engines and transmissions in their shop stock—just in case. Surely, some unit in the world could use one of those engines to fix a truck right now. Keeping this type of item at the warehouse under Army Materiel Command ownership until needed to repair a not-mission-capable vehicle would save the Army millions of dollars in unnecessary purchases of major assemblies. Frankly, if a truck goes down for an engine, the mission will continue whether the engine is available or not. Surely a unit can wait a day or two for its requisition to be processed by the warehouse to get that truck up and running again. A unit could use that time to pull the engine while it waits.

IX-expendable is beyond me. All of those items are property book-type items and, at the very minimum, should be cataloged as class II nonexpendables. That would prevent SAMS-E systems from ordering these items and would save the Army a lot of money—and quite a few careers.

Our logistics systems do an outstanding job of providing the warfighters with the parts and supplies they need on the ground anywhere in the world. The question then is, what can we do better? The answer is: forecast. We can anticipate and forecast what our warfighters will need with the same level of accuracy expected from a field artilleryman targeting the objective. We need to use the logistics systems we have to anticipate and resource our Soldiers with the parts and supplies they need to sustain combat readiness at the highest possible levels and with the least amount of strain on transportation assets. Implementation of these recommendations will be a huge step in the direction of cost reduction and increased readiness levels.

CHIEF WARRANT OFFICER 4 MARTIN D. WEBB IS THE DEPUTY INSPECTOR GENERAL FOR THE 82D AIRBORNE DIVISION AT FORT BRAGG, NORTH CAROLINA. HE WAS THE SUPPORT AUTOMOTIVE MAINTENANCE OFFICER FOR THE 82D BRIGADE SUPPORT BATTALION, 3D BRIGADE COMBAT TEAM, 82D AIRBORNE DIVISION, SERVING IN TIKRIT, IRAQ, WHEN HE WROTE THIS ARTICLE. HE HOLDS A B.B.A. DEGREE FROM CAMPBELL UNIVERSITY AND AN M.B.A. DEGREE FROM FLORIDA STATE UNIVERSITY.

ALU Lecture Series Supports Cultural Awareness Skills Training

Dr. Rene Moelker, a sociologist with the Royal Netherlands Defence Academy and chairman of the European Research Group on Armed Forces and Society, lectured at the Army Logistics University (ALU) campus at Fort Lee, Virginia, on 5 April 2010 in the first of what is planned to be an ongoing series of lectures on cultural awareness.

Moelker spoke to students and guests about Dutch culture, Dutch military culture, and the ongoing Dutch mission in Afghanistan, where Dutch soldiers are doing their best to win the hearts, minds, and trust of the Afghan people. "It is difficult, and to really win the hearts and minds is probably impossible," Moelker said of the Dutch mission in Afghanistan. "They do a very good job, and they are very successful in reconstructing society. . . They are quite successful at doing so, but [their effort] lacks the commitment to stay for maybe 30 years."

Moelker said the Dutch military also needs to find out from the local Afghan population what their needs are. Small business, irrigation, and health services programs brought in by the Dutch military and businesses are improving conditions, but Moelker says that many times the Dutch rely on their own ideas and are not "asking the local population what they really need."

The problems the Dutch face in Afghanistan are similar to the problems faced by other coalition partners in the region, and this is why speakers like Moelker are beneficial in helping U.S. sustainers understand the military cultural experience. Though tactics may differ, the goal is the same—to win the hearts and minds of the people of Afghanistan. By hearing of others' experiences in the region, U.S. forces can learn new ways of dealing with problems they are already facing in Afghanistan and other nations where they are deployed.

Donna Winslow, ALU's cultural anthropologist, explains that Moelker and future speakers provide a new approach to cultural awareness training by exposing students to different cultures and the experiences of other militaries. "One of the things that many American Soldiers don't realize is just how small foreign forces are," said Winslow. "The entire Canadian Forces, including the Army, Air Force, Navy, and Reserves, will be no more than 100,000, and that is after expansion!"

Winslow says armed forces are also affected by the size and geography of their countries, but they do still have many similarities. "Militaries across the world, whether you are in Singapore or America, share many things in common, which is why they get along," said Winslow. "However, their geography or their national

character, or their national circumstances, if you will, affects many things. If you are working in a multinational environment, you need to be perceptive enough and alert enough to not just do it your way, because if you do that, you are going to build a lot of animosity and barriers."

Many theaters now have coalition-run operations that require Soldiers to work with the armed services of several different countries and with nongovernmental organizations. The goal at ALU is to teach students the critical thinking skills needed to recognize the differences that may affect their relationships in multinational assignments.

"Cultural awareness is about immediately knowing that if you are not sitting down with someone that is like you, who is not a sustainment specialist or military, that there's going to be a different perspective immediately," said Winslow. "Both of you have to be alert to the fact that that's maybe going to have an impact on the way that you're communicating."

Winslow calls the method of teaching Soldiers how to recognize cultural differences, without actually training about one specific culture, "cultural skills awareness training," or CAST. The idea is to teach students a set of critical thinking skills that can be applied to any environment. "The goal is to train the perception—I call it the cultural muscle—to be alert to your environment, to be alert to the people in it," says Winslow, who calls culture a subtle form of communication. "To be culturally alert is to be mentally agile." Winslow believes that the training does not have to be a separate class but can instead be incorporated in current classes.

"All we need to do is to look at places where people are doing problem solving and critical thinking and use culture as a critical vehicle to promote those thinking processes," says Winslow. "And in places where people are very concerned about the time they need to train the skills, for example in the warrant officers training, it doesn't necessarily need to detract from building a warrant officer culture because you can ask the students to talk about the regimental system in their branch of specialty—which is also a unique culture within the larger sustainment culture—like a clan within a tribe."

Individuals interested in upcoming cultural events, speakers, and skills training can contact Donna Winslow at (804) 765-0745. Upcoming events will also be posted on the ALU website.

—Story by Julianne E. Cochran

Improving the Automatic Reset Induction Process

BY MARK S. PAUN

Two years ago, the Army faced a problem as hundreds of thousands of pieces of equipment were being moved from Iraq to the United States for reset. The existing automatic reset induction (ARI) retrograde process for the Army was unable to provide 100-percent total asset visibility (TAV) and in-transit visibility (ITV) to Army life-cycle management commands throughout the process.

ARI items are items that are automatically inducted into sustainment-level reset. Sustainment-level reset is performed above the organizational and direct support levels by installation directorates of logistics, contractors, and the Army's industrial base.

The ARI process stretches across 7,000 miles from northern Iraq to Red River Army Depot, Texas. The key stakeholders are heavily involved on a daily basis supporting the war. An estimated 800,000 pieces of ARI supplies and equipment are scheduled to be retrograded to the continental United States (CONUS) in the next 2 years, and the retrograde pace will accelerate from 1,500 pieces to 4,500 pieces per month.

In June 2008, the Military Surface Deployment and Distribution Command (SDDC) Lean Six Sigma staff combined forces with the Army Sustainment Command's Continuous Process Improvement office to improve the ARI process flow of equipment from Operation Iraqi Freedom to CONUS source-of-repair facilities. The

two commands oversee most of the ARI process—SDDC owns surface transportation and the Army Sustainment Command owns supply—so it was only logical to combine the staffs to work on the project.

Principles, Goals, and Objectives

Major General Robert M. Radin, who was then the commanding general of the Army Sustainment Command, provided the project's basic principles, goals, and objectives. [General Radin is now the Assistant Deputy Chief of Staff for Operations, G-4, Department of the Army.] He directed that Lean Six Sigma be the methodology used to improve the process. Lean Six Sigma combines the principles of Lean (reducing and eliminating nonvalue activities) with Six Sigma (reducing variation and increasing quality).

Major General Radin's six principles for the effort were to—

1. Improve accountability.
2. Improve visibility.
3. Develop a single process.
4. Maximize automation.
5. Eliminate multiple touch points.
6. Speed to the rear. (This refers to velocity—the need to return ARI items to CONUS as soon as possible for repair or rebuild to support Army Force Generation.)

His specific goals and objectives were to—

- ❑ Provide 100-percent supply accountability (TAV).
- ❑ Provide 100-percent in-transit visibility (ITV).
- ❑ Produce a 20-percent reduction in overall process time.
- ❑ Reduce duplication of efforts (such as rewriting radio frequency identification tags and military shipping labels).
- ❑ Eliminate the manual process used to reconcile hundreds of thousands of dollars' worth of ARI equipment annually.
- ❑ Eliminate the Army's associated liability of more than \$700 million in lost equipment.

Identifying the Problem

During the measurement phases, the Lean Six Sigma team tracked and measured more than 251 ARI

A Soldier with the 840th Deployment and Distribution Support Battalion, Redeployment Support Team 1, verifies information on military shipping labels for 3d Armored Cavalry Regiment equipment at a forward operating base in Iraq.



shipments in order to identify the exact point in the process where supply and transportation visibility and the ability to automatically close out shipments were lost. The loss was occurring when the original sustainment transportation control number (TCN) was changed to a unit movement TCN midway through shipping process. The effect is similar to a commercial carrier changing its shipment tracking number en route without notifying the customer or letting him know the product he received is really what he ordered.

The bottom line was that Army and Defense Logistics Agency supply automation systems did not interface electronically with Army and joint transportation and mobility systems.

Once the team identified where in the process the problem was arising and what was causing the loss of TAV and ITV, it immediately went to work to eliminate the cause and improve the process. This can be the hardest phase in a Lean Six Sigma project because some stakeholders are very apprehensive about change, especially while fighting a war, and it is crucial to not disrupt a step in a process that is working well.

Searching for a Solution

In December 2008, a team of supply, automation, and transportation subject-matter experts and stakeholders joined to collectively improve the process. From the collaboration, three courses of action (COAs) were developed.

COA 1 was a supply-centric process that mirrored current CONUS-to-overseas sustainment (supply) accountability and ITV. It was based on a commercialized door-to-door delivery enterprise solution. It worked well in a noncontingency environment, but it lacked the contingency surface transportation planning, vessel allocation, scheduling, priority, execution, and ITV functions needed to compete with unit deployment and redeployment movements and priorities.

COA 2 was to continue to use a modified unit redeployment process but implement it farther north in Iraq—basically the status quo COA. It did not provide real-time supply accountability and ITV. It was not a single process, and supply and transportation automation were still separated. Manpower to execute the Joint Operation Planning and Execution System (JOPES) also was not available to process requirements; no one was willing to sign up for the mission in Iraq or Kuwait.

COA 3 was a combination of the other two, with the customer placing a requirement into JOPES for vessel planning, forecasting, and allocation. SDDC then would ship the item under separate supply and transportation TCNs with parallel accompanying documentation, radio frequency identification tags, and military shipping labels. The analysis of COA 3 proved that it would be very manpower intense and actually

increase the complexity of the process by adding many redundancies, duplications, and efforts.

Finding a Solution

None of the three COAs were amenable to everyone. So a fourth COA was considered, but at first it was not widely supported because it meant dramatically changing the way the Army does supply retrograde transportation in a contingency operation for a long time to come. The COA called for developing a capability in the Transportation Coordinators' Automated Information for Movement System II (TCAIMS II) to accept Army War Reserve Deployment System-generated supply TCNs and the associated supply and transportation data needed to efficiently and effectively plan, allocate, and execute ocean vessel support.

However, COA 4 met all of Major General Radin's goals and objectives and every stakeholder and customer requirement. In June 2009, after an in-depth analysis, Lieutenant General Mitchell E. Stevenson, the Deputy Chief of Staff, G4, directed that COA 4 be executed.

The improved ARI process is the beginning of a new era in which supply and transportation automation systems will be able to directly interface with each other. In November 2009, the software upgrades to TCAIMS II were completed. In late December, the upgraded TCAIMS II was fielded and training commenced in Kuwait and Iraq.

The first shipment under the new process pilot test was conducted to ensure that the changes made would in fact improve the process. Several ARI pieces of rolling stock were selected to test the process. The test validated the process improvement and resulted in:

- ❑ 100-percent end-to-end TAV and ITV of ARI shipments (14 out of 14 shipments).
- ❑ 92-percent ARI automated closeout and reconciliation at the source-of-repair facilities (13 out of 14 shipments).
- ❑ 92-percent ARI married supply and transportation data elements (13 out of 14 shipments).
- ❑ 27-percent reduction in ARI process time (105 days from 149 days).

The process is now being expanded into other retrograde processes, with the containerized ARI retrograde process currently under study. Further expansion into other areas of deployment, redeployment, and sustainment are being explored.

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Using Holiday Block Leave to Update Training Materials

BY DONALD D. COPLEY, JR., AND RODNEY EDMOND

In the second of three articles describing best practices identified during an Army Training and Doctrine Command accreditation visit to the Army Soldier Support Institute, the authors discuss a procedure for using the leave period at the end of the year to make sure Recruiting and Retention School courses and training materials reflect the latest practices of the U.S. Army Recruiting Command.

The Recruiting and Retention School (RRS) at Fort Jackson, South Carolina, faces the ongoing challenge of updating its courses and training materials to incorporate changes occurring in the U.S. Army Recruiting Command (USAREC). The school needed a streamlined process to ensure that all lesson plans remain relevant. The solution was to coordinate revisions of training materials with the school's academic calendar, specifically the holiday block leave period at the end of the calendar year. The Army Soldier Support Institute (SSI), through the RRS, has been using the holiday block leave period as the occasion to update all of the school's lesson materials.

The Army Training and Doctrine Command (TRADOC) accreditation team that visited the SSI from 13 to 24 July 2009 identified this process as a "best practice." This article will discuss the processes used to leverage technology and conduct a 100-percent lesson plan update while minimizing the impact on traditional holiday policies.

The holiday block leave period is a 2-week period during which Soldiers who are assigned to the Army's training centers are allowed to return home for the

Christmas and New Year's holidays. [This period was previously known as "Holiday Exodus." Its name was changed to "holiday block leave period" by TRA-DOC Regulation 1-11, Staff Procedures, dated 10 June 2009.] Under the guidance of the SSI, the RRS developed a Six Sigma-supported streamlined process to conduct the annual lesson plan update procedures during the holiday block leave period. This newly designed process has allowed the RRS to update all lesson plans (for 16 functional courses) within the 2-week holiday block leave period.

Preparing for the Update Process

The RRS training developers created a streamlined approach for developing lesson plans that combines all lessons, slides, and practical exercises into one format. The incorporation of instructors into the refined update process allows the RRS to use all available subject-matter-expert personnel. Instructors are trained as instructor-writers. They have received training in the development of lesson materials, task analysis, and design methodologies. The RRS update process simply leverages the instructors' subject-matter expertise.

The training developers then conducted instructor key personnel training with the cadre. During the hectic holiday block leave period, as an alternative to having 10 developers hastily attempting to keep lesson materials current, the RRS allowed cadre to become combat multipliers by assisting in the updating of lesson materials.

The lesson plan format is a Microsoft PowerPoint document that combines all of the regulatory guidelines outlined in TRADOC Regulation 350-70, Systems Approach to Training Management, Processes, and Products, and the Automated Systems Approach to Training (ASAT) database. During a Lean Six Sigma study, errors in lesson plan materials were discovered. It was determined that these errors were

INSTRUCTORS ARE TRAINED
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THEY HAVE RECEIVED TRAINING
IN THE DEVELOPMENT OF LESSON
MATERIALS, TASK ANALYSIS,
AND DESIGN METHODOLOGIES.
THE RRS UPDATE PROCESS SIMPLY
LEVERAGES THE INSTRUCTORS'
SUBJECT-MATTER EXPERTISE.

THE RRS TRAINING DEVELOPMENT TEAM USES SHAREPOINT AS THE TRACKING MECHANISM TO ENSURE THAT ONLY THOSE LESSONS THAT HAVE BEEN REVIEWED SEVERAL TIMES ARE RELEASED FOR INSTRUCTION. THE CHANGE MANAGEMENT PROCESS IS USED THROUGHOUT THE YEAR SO MATERIALS REMAIN CURRENT WITH USAREC POLICIES AND PRACTICES.

caused by the multiple platforms used in developing training materials. An innovative design captured all lesson plan, multimedia, and practical exercise materials into a single document, allowing one document to contain all three products. This eliminated many of the errors.

The RRS training developers extended the update process and created workflows within SharePoint that allowed for all changes to be captured and documented. This workflow also serves as an audit trail for capturing changes made to lesson plans throughout the year. The use of SharePoint allows the training developers to assign lesson plans to an instructor, capture the recommended changes, and review each lesson plan before it is released for instruction in January.

In preparation for the updates, the training developers create a tracking sheet within SharePoint. Lesson plans are assigned to instructors based on their expertise and skill level. A plan is developed to have all lesson materials updated before the beginning of the holiday block leave period. This allows for editing, workflow, and quality control processes to be completed before instruction begins during the first week of January. The lessons are then released to the assigned instructors for edits, returned to the RRS training developer, and subsequently approved by the training director for release.

During Holiday Block Leave

Approximately 6 weeks before the holiday block leave period, the RRS stops enrolling new students. This gives instructors time to use the streamlined approach to update the lesson plan materials for all 16 courses. The larger courses use the team concept and collaborate with each other to garner tactics, techniques, and procedures that are ready and relevant based on changes within USAREC.

Doctrine is the key to quality instruction. Cadre review all doctrinal changes, messages, and Battle Command Knowledge System postings for all possible changes to course materials. The doctrine team at USAREC headquarters also provides support during the lesson update process. Instructors are required to provide supporting proof when recommending

changes to lesson materials by citing appropriate doctrine.

Fielding and Post-Leave Implementation

After completing the entire lesson update process, all changed lesson materials are forwarded to the RRS training director for review and approval. Only approved lesson materials are released for instruction. Again, the RRS training development team uses SharePoint as the tracking mechanism to ensure that only those lessons that have been reviewed several times are released for instruction. The change management process is used throughout the year so materials remain current with USAREC policies and practices.

The RRS training development team has established a process that allows it to keep pace with the business changes within USAREC. Long gone are the days when the training developer spent massive amounts of time updating courseware. The new streamlined process prevents the team from becoming inundated with changes that cripple its ability to keep pace. We believe our ability to leverage technology will benefit the command and subsequently change the traditional methods of lesson material maintenance within TRADOC. Through the leveraging of technology, continuous improvement, and innovative thinking, the RRS continues to shape the future of training development.

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The Army Airlift Clearance Authority: Speeding Supplies to the Warfighter

BY SHANNON R. LAUBER

The Army Airlift Clearance Authority (AACA) works to improve the velocity of the supply pipeline serving the warfighter while simultaneously saving the Army a substantial amount of money. This 13-member organization, primarily composed of Department of the Army (DA) civilians, monitors cargo offered for military air transport by units across the Army.

AACA's goal is to employ scarce air transportation assets efficiently and effectively and spend transportation dollars prudently by shipping only the highest priority items by air. Situated at Redstone Arsenal in Huntsville, Alabama, AACA is part of the Transportation, Operations, Plans, and Security Division of the Logistics Support Activity (LOGSA), which is a separate reporting activity under the Army Materiel Command.

Reorganizing AACA

Officially, AACA validates, challenges, and controls all Army-sponsored cargo eligible for air transportation to meet the provisions of Army Regulation (AR) 59-3, Movement of Cargo by Scheduled Military Air Transportation, and Defense Transportation Regulation 4500.9-R, Part II, Cargo Movement. AACA also validates Army cargo not related to unit moves for transport by a special assignment airlift mission (SAAM).

AACA is prepared to operate 24 hours a day, 7 days a week. With the assistance of an after-hours duty roster, automated information systems, and a staggered work schedule, the agency has been operating around the clock since the advent of Operation Enduring Freedom.

Aircraft like this C-5 Galaxy can transport a wide variety of air-eligible Army cargo to a theater, including oversized cargo and rolling stock.



In January 2009, AACAs deputy director, John B. Hall, Jr., restructured the organization's efforts along new lines to better serve customers. His initiative stemmed from a previous Lean Six Sigma study. Hall commented:

I wanted to spread the workload evenly among my people. It was also important to improve our efficiency by decreasing the time it took to clear air cargo destined for the warfighter, so I assigned individuals specific responsibilities. Previously, shipments had been handled by whoever was available at the moment, with multiple tech[nician]s sometimes touching the same shipment. This process frequently created confusion and duplication of effort.

The reorganization created three distinct teams, the combatant command focused team (CCFT), the customer support team (CST), and the transportation analysis team (TAT), that work together to accomplish the mission, each with a separate area of focus.

Clearing Cargo for Air Transport

AACA's main responsibility—clearing Army-sponsored air-eligible cargo for transport—falls to the CCFT. This team has been subdivided by geographic regions, including Iraq and Kuwait, Afghanistan, and Europe.

What cargo is eligible for air transport? According to Cindy Fugate, the TAT lead, eligible cargo includes “any item that's air transportable and not prohibited because of its hazardous materials classification.” This rather broad definition includes, but is not limited to, most class IX (repair parts), perishable foodstuffs, medical items, sensitive or protected items, and items needed to correct safety problems.

When a requisition is ready for shipment, the responsible shipping activity makes an advance submission of Department of Defense Form 1384, Transportation Control and Movement Document (referred to as an advanced transportation control and movement document [ATCMD]), and offers air-eligible cargo for air clearance if the requested delivery date justifies it. Shippers offer materiel for air clearance by entering ATCMDs into the Financial and Air Clearance Transportation System (FACTS), a Department of Defense system (used and funded by all of the services) that



The Air Force's 436th Aerial Port Squadron at Dover Air Force Base, Delaware, prepares Army-sponsored air-cleared cargo for transport overseas.

clears freight for air movement and helps the services manage their transportation funds.

Offers typically arrive by batch feed from other systems, such as the Defense Logistics Agency's Distribution Standard System, or by manual entry if the shipper has access to FACTS. FACTS automatically discriminates among these offerings. Some shipments, such as most class IX items, clear for air transportation immediately. Other shipments, although offered in anticipation of using air assets for movement, receive a surface designation from FACTS; these shipments are diverted to surface ports of embarkation for onward movement to their final destinations.

An asset of FACTS is the flexibility of its system logic: The movement of items automatically cleared for air transport or diverted to surface transportation can be changed in response to current theater conditions and operating tempos through a construct known as movement authorization management rules. Shippers of consignments that are not automatically routed for air or surface movement typically enter a challenge file in FACTS. It is at this point that the AACA technicians of the CCFT become involved.

Working With Challenge File Cargo

To be placed in the FACTS challenge file, items offered for air clearance must meet certain defined criteria. For example, when the difference in the air versus ground shipping cost exceeds \$5,000, FACTS marks the order for further review. Other conditions that might necessitate a review include cargo that exceeds a designated weight or volume limit set by DA or items with specific national stock numbers. In the past, items like canned air, copy paper, and bubble wrap have made their way into the challenge file.

Once in the challenge file, transportation specialists from AACA check the ATCMD in FACTS and then send an email about the shipment to a designated point of contact (POC) in theater. AACA technicians serve in an advisory capacity, asking the customer to confirm his desire to ship by air while providing possible alternatives, like splitting the shipment between air and surface assets. The theater POC has 72 hours to respond before the shipment diverts automatically; however, AACA technicians typically resolve the challenge much faster.

AACA'S GOAL IS TO EMPLOY
SCARCE AIR TRANSPORTATION
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PRUDENTLY BY SHIPPING ONLY THE
HIGHEST PRIORITY ITEMS BY AIR.

Jack Dodge, the CCFT lead, notes, "The efforts of the CCFT in partnership with our theater POCs have allowed us to clear 90 percent of the challenge[d] cargo within 24 hours." Shipping by air is obviously very expensive when compared to surface movement. AACA personnel strive very hard to ensure prudent use of Army transportation funds while improving pipeline velocity to the warfighter by helping customers conserve valuable aircraft space for truly high-priority requisitions. AACA technicians assist with rerouting items of a more routine nature, such as cleaning and office supplies.

Over the years, these efforts have paid off. In the last 13 fiscal years, AACA has saved the Army over \$1.6 billion in shipping costs (an average of \$127.5 million dollars per year), with much of the savings accruing in fiscal year 2003 and later. With 3 months remaining in the year, cost avoidance for 2009 has reached nearly \$330 million.

Despite the large savings, relatively few shipments actually require AACA involvement. In the last 10 years,

Cargo cleared and prepped for air transport to Operations Iraqi Freedom and Enduring Freedom awaits available aircraft at Dover Air Force Base.

slightly over 9 percent of offered shipments have found their way into the challenge file. Of these, approximately 60 percent eventually received a divert-to-surface status. This diversion to surface transport represents over 164,000 tons of cargo that might have tied up valuable air transport; that is the equivalent of over 1,900 fully loaded C-17 missions. The reduced demands on the airlift fleet mean the warfighter has a much better chance of receiving what he needs when he needs it.

Managing Foreign Sales and SAAMs

In addition to clearing all types of cargo for movement by air, the CCFT has the added responsibilities of approving foreign military sales (FMS) shipments for air transport and validating SAAMs. FACTS challenges FMS cargo based on a set of rules established jointly with the U.S. Army Security Assistance Command (USASAC). AACA then coordinates challenged FMS shipments through the USA-SAC transportation team and the country case manager for the purchasing nation.

According to AR 59-9, Special Assignment Airlift Mission Requirements, SAAMs are "On-demand missions that require special pickup, airlift, and/or delivery by AMC [the Air Force's Air Mobility Command]." Unusual conditions requiring a SAAM might involve outsized cargo (greater than 84 inches in any one dimension), especially heavy cargo, sensitive cargo, cargo requiring urgent movement, or other legitimate circumstances that rule out the use of normal airlift procedures. A SAAM requires an aircraft dedicated to a specific mission and delivery date. This is in contrast to normal-channel cargo, which is handled on a first-in, first-out basis and can be bumped by higher-priority requirements. Cargo traveling to remote locations not served by channel airlift or traveling between scheduled channel flights could typically benefit from a SAAM.

Assisting Customers

The CST works alongside the CCFT to improve the flow of materiel to the warfighter. This team responds to inquiries about a shipment's status (such as cleared for air, diverted to surface, or pending) and frequently





assists shippers in correcting errors made during the entry of ATCMDs into FACTS. Such errors can unnecessarily delay cargo.

The team also works on track-and-trace requests, helping shippers and customers learn when, where, and how something shipped or even if it shipped at all. The CST lead, Pebble Price, explained the team's goal: "Because it is so important that warfighters receive their equipment and supplies expeditiously, the customer support team's objective is to provide assistance to shippers, assuring ATCMD data integrity and the fluid flow of Army shipments at the ports."

Besides these duties, the CST creates and promulgates customer advisories; maintains liaisons at two aerial ports of embarkation (APOEs) (Dover Air Force Base, Delaware, and McGuire Air Force Base, New Jersey); clears arms, ammunition, and explosives (AA&E) consignments for entry into ports; handles "greensheet" requests; and provides basic transportation and FACTS system support.

Although infrequent, customer advisories act as important periodic bulletins that inform shippers of new or changed policies and procedures as well as particular events or conditions that require special attention. The goal, as always, is the continued efficient and effective operation of the transportation system.

In line with this goal, the CST lead also manages two port assistance liaisons (PALs), one at Dover and another at McGuire. The PALs are individual mobilization augmentees who serve as "boots on the ground" at these APOEs. They expedite and trace Army cargo, divert cargo with the concurrence of the CCFT, correct documentation errors, aid all services with special exercises, and generally assist the APOEs' customer service personnel when problems arise with Army shipments.

An important aspect of the PALs' work is dealing with frustrated freight. Cargo arriving at an APOE unplanned, unannounced, or without the necessary and correct documentation becomes frustrated. It is part of the PALs' job to research the frustrated items, contact the shipper, generate the necessary documentation, and enter that documentation into FACTS so the materiel can flow to the warfighter.

Expediting High-Priority Cargo

The CST and the PALs also shepherd Army cargo that has been "greensheeted." Greensheeting cargo allows a specifically identified shipment to gain movement precedence over other Army cargo, including cargo with a required delivery date of 999 (highest priority). Typically, greensheets are used only in sporadic

instances, such as when a surge of shipments creates a backlog at one of the APOEs.

A greensheet action can originate with the warfighter or with the shipper. In either case, AACA works to validate the requirement with the designated theater POC before expediting the cargo in question. When an item is expedited in this manner, its movement takes precedence over other Army shipments only; shipments sponsored by the Navy, Marine Corps, and Air Force are not affected. Greensheets must be submitted in writing for cargo already entered into FACTS and require the signature of an official who is a lieutenant colonel or above on the military side or a GS-14 or above on the civilian.

Another important job handled by the CST involves clearing AA&E shipments. The amount of explosives each APOE may hold at one time is limited to a total known as the “net explosive weight” (NEW). For this reason, AA&E shipments must be coordinated with the APOE before they may be released for delivery. Explosives shipments must be entered into FACTS, where they are placed into a hold status while AACA technicians work through a multistep process to obtain a clearance number and delivery date. In general, AACA serves as a liaison between the APOEs and the shipper, helping to ensure that the APOEs do not inadvertently exceed their maximum allowable NEW.

The CST provides direct support to shippers and the warfighter when they have questions regarding FACTS

or the air clearance process in general. The CST also functions as a gatekeeper for all Army users seeking access to FACTS. The team endorses a shipper’s need to add FACTS capability to its office and forwards its request to the FACTS Program Management Office in Norfolk, Virginia.

Conducting Transportation Analyses

The third and final team in AACA’s lineup is the TAT. Before AACA’s reorganization in January 2009, transportation analysis was performed on an ad hoc basis when time and conditions allowed. However, John Hall wanted a dedicated analysis team because of the strong demand for analyses and his desire to develop metrics for AACA. As he observed, “Organizing the transportation analysis team enabled the AACA leadership to make sound decisions based on factual data. The TAT has become a valuable source for analytical transportation information and is sought after by LOGSA personnel as well as major commands and headquarters staffs.”

As its name implies, the TAT investigates and evaluates transportation data to solve specific problems, with the aim of improving the effectiveness and efficiency of operations involving Army cargo. One of its first tasks was serving as the lead for a joint study focused on reducing the amount of “no hit” cargo that arrives at the APOEs. [No hit cargo is cargo that is stalled because it cannot be matched to a record within automated systems.]

A 10,000-pound loader stands ready to place empty Air Force 463L pallets into a C-5 aircraft. These pallets are used to move cargo cleared for air movement.



When the transportation system operates as designed, shippers offer their cargo for air clearance by entering an ATCMD into FACTS. Once cleared for air movement, FACTS advances the ATCMD into the Global Air Transportation and Execution System (GATES), an Air Force system used by the APOEs for cargo management. When cargo arrives at the APOE, GATES requires that it be checked into the system in preparation for its onward movement to the warfighter.

Shipments that arrive at a port without an ATCMD showing in GATES cannot be checked in immediately and become, at least temporarily, no hits. With no ATCMD advanced from FACTS to GATES, APOEs have to process the shipment manually. While there could be a variety of reasons for this, the result is the same: no hits disrupt the aerial pipeline, causing delays and generating additional labor to process the cargo.

The aerial no hit working integrated product team hopes to identify actions that each service's air clearance authority can take within its respective command and control to reduce or eliminate the incidences of no hits. The study is ongoing, and its results will be presented in the next fiscal year.

Part of the TAT's job description includes reviewing changes to policies and procedures to assess their impact on transportation and gauge the feasibility of new transportation principles, concepts, and practices. Recently, personnel from the U.S. Central Command (CENTCOM) J-4 visited AACA in Huntsville to collaborate on a proof-of-principle concept for an air clearance authority in the CENTCOM area of responsibility.

Since the Army ships the largest amount of cargo to the theater, CENTCOM wanted the Army's assistance in developing a model for a theater air clearance authority that could provide many of the same benefits that continental United States (CONUS) air clearance authorities provide. CENTCOM also hoped to gain oversight over retrograde shipments returning to CONUS. The TAT assisted in developing a baseline plan suitable for a 90-day test period, and the plan is currently being reviewed by theater personnel.

Developing Metrics for AACA

Besides serving as lead on the aerial no hit working integrated product team and partnering with CENTCOM on a theater air clearance authority, the TAT has worked since its inception to create meaningful metrics for AACA and its teams. Of particular interest are the shipments automatically relegated to the challenge file by FACTS system logic. The TAT keeps track of the number of challenges recorded by FACTS each month and further classifies them by geographic region, port of embarkation, port of debarkation, ultimate mode of travel (air or surface), and what commodities (by weight) represented the most challenges. This type of

Questions for AACA?

For answers on FACTS access, tracking cargo, explosive shipments, or ATCMD corrections: Contact the Customer Support Team at (256) 955-9756, -9762, or -9765.

To ask questions on shipment status (air versus surface), scheduling a special assignment airlift mission, greensheeting specific cargo, or gaining theater concurrence for expedited movement: Contact the Combatant Command Focused Team at (256) 876-6508, (256) 955-9755 or 955-9767, or (256) 313-6024.

analysis keeps the CCFT aware of each region's workload and helps it spot trends and patterns.

In analyzing workload, the TAT tracks the number of explosives shipments sent to various ports each month. The TAT also keeps tabs on the numbers and types of errors generated by ATCMDs entered into FACTS. When errors originate from system-to-system data feeds, it usually indicates a systemic disconnect. Analyzing and sharing this information with the CST can often yield proposals for subsequent system changes. Finally, the TAT tracks use of the movement authorization management rules. Rules used too often or never at all might require fine-tuning to optimize the effectiveness of their impact on materiel flow.

The TAT has become a welcome addition to AACA's portfolio, helping to round out its capabilities in the transportation arena while broadening the organization's understanding of the bigger distribution picture.

For many years, AACA has worked a double mission for the warfighter: keeping high-priority cargo moving through the pipeline while helping the Army to spend its transportation funds wisely. Despite its small size, the office has proven itself to be efficient and effective at both missions. "The AACA acts as the eyes and conscience of the Army when it pertains to regulating the flow of high-priority materiel to the theater," observed Lieutenant Colonel Diane Richie, the chief of the Transportation, Operations, Plans, and Security Division at LOGSA. A close-knit group of dedicated personnel, AACA stands ready to support warfighters around the globe in all their transportation needs.

SHANNON R. "ROB" LAUBER IS IN THE LAST YEAR OF AN ARMY MATERIEL COMMAND FELLOWSHIP. HE WROTE THIS ARTICLE WHILE ASSIGNED TO THE TRANSPORTATION ANALYSIS TEAM OF THE ARMY AIRLIFT CLEARANCE AUTHORITY AT HUNTSVILLE, ALABAMA. HE HOLDS A B.S. DEGREE IN INDUSTRIAL MANAGEMENT FROM CLARKSON UNIVERSITY AND AN M.B.A. DEGREE FROM TEXAS A&M UNIVERSITY-TEXARKANA. HE IS LEVEL III CERTIFIED IN LIFE-CYCLE LOGISTICS FROM THE DEFENSE ACQUISITION UNIVERSITY.

BCS3: Take Another Look

BY LIEUTENANT COLONEL DALE FARRAND

The Battle Command Sustainment Support System (BCS3) is the only sustainment component of the Army Battle Command System (ABCS) suite. BCS3 can be used for a large number of applications, including in-transit visibility of deployment, redeployment, and sustainment shipments; supply-point asset visibility; equipment maintenance status; and unit logistics status using bottom-up reporting.

BCS3 is designed to be used at every echelon, from company to theater sustainment command, and across all types of formations, from brigade combat teams to all types of support brigades and division and corps headquarters. BCS3 is the only ABCS component that can operate on both classified and unclassified networks. It provides this broad spectrum of capabilities across all formations in the Active Army, Army National Guard, and Army Reserve (as well as formations in the Marine Corps and other governmental organizations).

However, BCS3 has developed a reputation for being difficult to use because each user must filter all of the information available to the one specific data stream he requires. This reputation was deserved in the past, but the BCS3 product manager and Army Training and Doctrine Command capability manager (TCM) have been working hard over the past 2 years delivering an updated BCS3 to the field that should change the minds of even the staunchest critic.

How BCS3 Operates

BCS3 pulls supply and maintenance status data from Standard Army Management Information Systems (STAMISs) through the Army Materiel Command's Logistics Support Agency (LOGSA). BCS3 also pulls supply and maintenance data from depot and joint databases as required to complete the common operational picture. As the Army continues to transform how it operates and as users of the system identify requirements for new data (for example, data concerning the container management initiative), the BCS3 product manager is constantly negotiating for access to more data sources.

For in-transit visibility, BCS3 pulls data from both classified and unclassified satellite-based tracking systems to provide positional data on all military and commercial vehicles within an area of operations. All of those data come into BCS3 as soon as the machine is powered on and connected to the BCS3 national

server at Fort Belvoir, Virginia. If users want to get a certain piece of information, they can filter out all other data and BCS3 then graphically depicts the required information on either a map or a report.

BCS3 Software

The original BCS3 system (legacy version) and associated hardware were fielded to the Army in 2004. While the product manager continued to improve BCS3's hardware, its software was not updated until 2008. The product manager and TCM worked together to field the Ease of Use version of the BCS3 software beginning in December 2008. The Ease of Use software provides several improvements to the legacy software. The software developers—

- ❑ Simplified the graphical user interface and made it more intuitive.
- ❑ Reduced the total number of steps required to start the system.
- ❑ Added one-click buttons that permit quicker access to commonly used information.
- ❑ Introduced a wizard capability to simplify building filters and operational views.
- ❑ Incorporated joint doctrinal terms and symbols.
- ❑ Improved STAMIS data feeds. BCS3 now pulls data from LOGSA instead of from regional databases.
- ❑ Revised the processing procedures for radio frequency identification tag data to improve accuracy.
- ❑ Redesigned the database to ensure that data displayed on maps and in tabular reports agree.
- ❑ Added a logistics reporting tool that integrates data from different echelons.
- ❑ Added an easy-to-use, user-defined task organization tool.

In August 2009, the product manager began fielding the Logistics Reporting Tool (LRT) version of BCS3 software. While LRT is essentially the same system as the Ease of Use software, it has several improvements to specific functions (similar to a software patch) that make it necessary and valuable to the warfighter. Most significantly, LRT allows a report to be submitted at the lowest level and the data to be automatically populated at each echelon based on the unit's task organization. This eliminates man-hours and possible human error. (In the Ease of Use version, the report is manually compiled at each echelon.) BCS3 LRT's other improvements include—

- ❑ The ability to generate and publish the munitions report (MUREP), bulk petroleum contingency report (REPOL), and bulk water report—all of which are required while deployed to a joint operation.
- ❑ Expanded reporting capabilities for classes I (subsistence), III (petroleum, oils, and lubricants), V (ammunition), VI (personal demand items), IX (repair parts), and X (materials for nonmilitary programs).
- ❑ The ability to aggregate reports using the task organization tool in a nonstandard method. Users can build forward operating base logistics reports or task organizations for planning purposes and for contingency operations using the Army's entire database of Active and Reserve component unit identification codes.
- ❑ Updated Federal Logistics Data information.
- ❑ Improved map graphics, including symbols for improvised explosive devices.

Continuing Improvements

In addition to the two new releases of software, a few more improvements have been implemented, and BCS3 users should be aware of them.

First, BCS3 can interoperate with Command Post of the Future (CPOF). Currently, both LRT and Combat Power can be downloaded and displayed as applets on CPOF. [Combat Power is a single display report for maintenance, personnel, and classes III, V, and VII (major end items) information.] In-transit visibility, supply-point locations, and graphics can also be displayed on CPOF when provided by BCS3 through the unit's battle command server. The TCM and product manager are working to display maintenance reports, classes I, III, V, and VIII (medical materiel) data, and position reports on CPOF to provide maneuver and sustainment commanders with a quick snapshot of their units.

A new hardware system is being issued to units concurrently with the new software. This system (a Dell M90, replacing the IBM ThinkPad) is ruggedized and has a dual-core processor, twice the random-access memory (4 gigabytes) of the old hardware, and a 17-inch display. It is much more capable of handling the BCS3 operating system.

BCS3 functions can now be used without having a BCS3 box; LRT can be downloaded onto any computer. This allows users down to any level (such as a fuel supply point in a brigade support battalion) to fill in their required portion of the LRT input tab and send it to be incorporated based on the user-defined task organization. Users can also view the output from the LRT on any computer in a tabular format. A separate "running estimate" application can be downloaded to view all standard reports, such as Combat Power and classes of supply statuses.

Blue Force Tracker and Force XXI Battle Command Brigade and Below data will be fed directly into BCS3 by late 2010. Although data from these systems currently can be fed into BCS3, it requires battle command server connectivity.

Finally, the BCS3 product manager and TCM are working to improve BCS3's ability to generate MUREPs and REPOLs. Ideally, a BCS3 user will submit one MUREP and one REPOL that will satisfy both Army and joint reporting requirements. This function and the ability to take archived data and develop estimates in support of the military decision making process are on the horizon.

Several organizations throughout the Army have developed methods to employ BCS3 in garrison operations. For example, the 1st Sustainment Brigade at Fort Riley, Kansas, employs BCS3 within their sustainment operations center for both tactical and garrison units, providing a one-stop logistics center for all of Fort Riley. U.S. Army Europe has integrated BCS3 into its daily battle rhythm, especially within the G-4, where it is used for update briefings.

The BCS3 product manager, based at Fort Belvoir, and the TCM for sustainment command and control at Fort Lee, Virginia, are committed to ensuring that BCS3 meets users' needs. They are actively supported by the Army Deputy Chief of Staff, G-4, and have the resources to support all organizations through new equipment training, sustainment training, exercises, and deployments. The product manager also develops and maintains several computer-based training modules on BCS3 capabilities. Each module is approximately 5 to 10 minutes long and is accessible through the Sustain-Net Battle Command Knowledge System portal.

The BCS3 product manager and TCM work with the National Simulation Center at Fort Leavenworth, Kansas, and the Logistics Exercise Support Directorate at Fort Lee to ensure that new BCS3 software is available to support simulations. The Battle Command Training Centers are tasked and resourced to provide BCS3 sustainment training at every Soldier's home station.

For assistance with BCS3-related issues, contact the TCM for sustainment command and control, Colonel Kenneth King (kenneth.e.king@us.army.mil) or the BCS3 product manager, Calvin Pilgrim (calvin.pilgrim@us.army.mil).

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Aligning Metrics to Achieve Supply Chain Goals

BY MAJOR JOSEPH M. MROZINSKI

Metrics are a critical component in effectively managing a supply chain. So how does one know which metrics to use and how they affect achieving the desired supply chain goals? You would never drive a car without a speedometer because you know local police are using radar to measure your speed. The metric of speed also can be an indication that the driver, passengers, or others may be at risk. Therefore, it is important to know how fast you are going in order to avoid paying a fine or encountering a potentially hazardous situation.

Although it is easy to determine what metrics and information you must see while driving an automobile (such as speed, revolutions per minute [RPM], fuel level, and engine temperature), it is not so easy to decide what you need to know when managing a supply chain. When choosing a metric, it is important to remember that you get what you measure, so the metrics you choose will drive performance. Choosing the proper metrics allows managers to see how they are doing, but more importantly, it drives behavior for desired performance. Choosing the right metrics makes the difference between being a proactive manager or a reactive “firefighter.”

Planning for Uncertainty

Uncertainty is one characteristic that drives how to structure a supply chain. The greater the level of uncertainty, the higher the need is for flexibility and responsiveness. The strategy for managing a military supply chain is similar to a civilian company’s strategy for bringing a new product to market; both are driven by the level of uncertainty present.

The product life cycle is a tool that companies use to determine how to manage a product in terms of quantity, pricing, distribution, and promotion. The product life cycle consists of four phases: introduction, growth, maturity, and decline. (See chart at right.)

When considering the levels of uncertainty in conjunction with the product life cycle phases, it is difficult to plan for demand in the introduction phase. For example, nobody had an accurate idea of the demand for Cabbage Patch Kids in the 1980s until the manufacturer realized it could not match supply with demand. But, as the marketplace matured, demand became more certain and it became easier to predict how much supply would be needed to match demand.

The same is true for a military operation. As a theater of operations matures, uncertainty decreases and demand becomes more predictable. Therefore, the metrics employed should depend on the level of uncertainty in the supply chain. The ability to be responsive should be employed and measured in the early stages of a conflict.

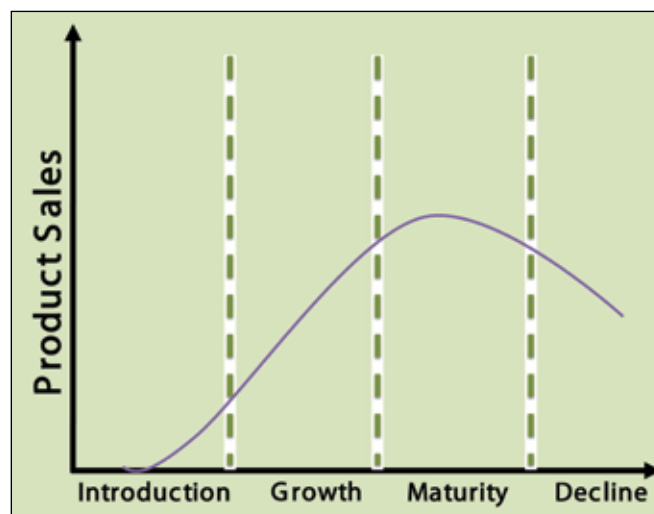
Supply Chain Buffers

When an operation varies in levels of certainty, three supply chain buffers—inventory, capacity, and time—allow logisticians to absorb the varying levels of uncertainty. Most often, they are not used exclusively but in conjunction with one another. Buffering with inventory is the most commonly known strategy. It consists of holding “just-in-case” or “safety-stock” inventory. A commonly known example of this is the Army Pre-positioned Stock program.

The method of buffering with capacity can vary depending on the operation. Buffering with capacity in the military is often done with transportation or lift capacity. Materiel may be concentrated in one or multiple geographic locations. When the need arises, the lift will be directed to move the materiel where it is needed.

Buffering with time can be done by adjusting the required delivery date to a later time. This option is

Product demand is reflected in sales. On introduction, product demand and sales are low. This chart demonstrates the bell curve of a product life cycle.



often not feasible, which drives the requirement to use other buffering options. The manner in which buffers are employed determines how successful supply chain managers will be. Let's look at three different types of operations and how they align their supply chains while using these buffers.

A company that produces bottled water cannot buffer with time or capacity. If one brand of bottled water is out of stock, a customer will normally select another brand. Customers will not backorder bottled water with express delivery because the express delivery charge will cost more than the price of the water. The problem cannot be fixed with additional capacity because the likelihood of backordering water is so low. Therefore, the company must buffer with inventory.

Another company provides refreshments at a sporting event. The company cannot buffer with time because the event only lasts a short time. It cannot buffer with only inventory because the refreshment stands do not have enough customers to distribute the product. Thus, the company must buffer with both inventory and capacity by sending sales representatives out to the customers.

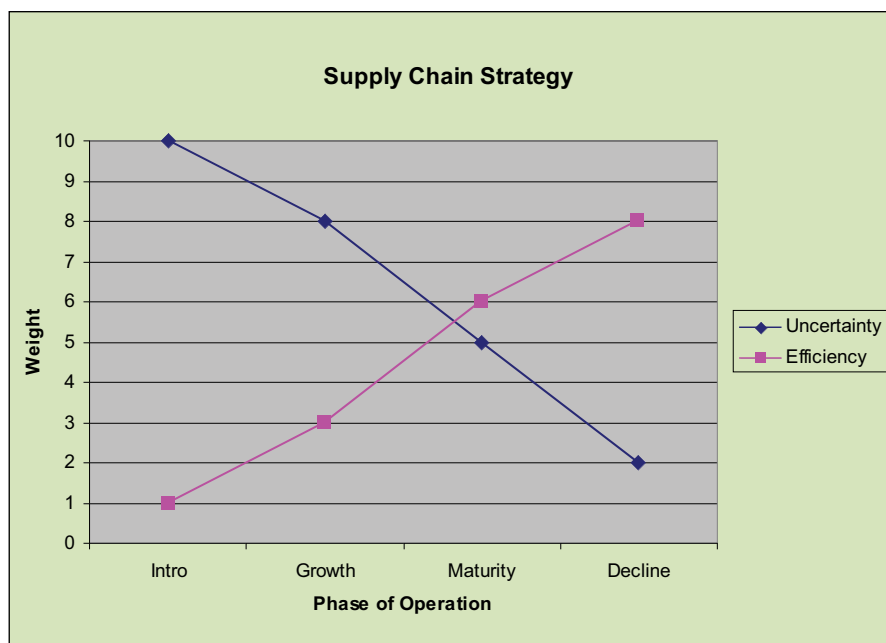
A company that provides human organs for transplant cannot buffer with inventory because organs are perishable. It cannot buffer with capacity because it would be unethical. So it must buffer with time.

The strategy used to employ buffers depends on two things: the marketplace in which you operate and, most importantly, the level of maturity of the operation. With the military supply chain, uncertainty decreases as a theater of operations becomes more mature. Therefore, how managers employ supply-chain buffers depends on the phase of the operation. The goal of establishing a metric is to see how well the buffers are working and to avoid future lapses in providing service to the customers.

As a product moves through the various stages of the product life cycle, efficiency becomes more important in supply chain strategy. The same is true for a military supply chain. As a theater matures, supply chain managers need to become more aware of how well they are using their resources—inventory, capacity, and time. (See chart above.)

Defining Goals

The goal in managing any material is simple: to match demand with supply. The level of responsiveness or efficiency you wish to attain while matching



Note how uncertainty declines as efficiency grows in a product life cycle.

supply with demand should correlate to the level of demand uncertainty. In a mature theater, supply chain managers should be more concerned about metrics that align with efficiency, such as inventory changes, equipment and personnel utilization, and other “lean” metrics. (A product or system is defined as lean if it is accomplished with minimal buffering costs.) However, in an immature theater, they should be more concerned about metrics that align with responsiveness, flexibility, and coordination, such as equipment and personnel availability, communications status, and time spent awaiting transportation.

Once you understand how to structure your supply chain based on the level of uncertainty and the three buffers used to absorb uncertainty, the final step is to look at each phase of a military operation and determine the goals of using those buffers. For example, during the introduction to a new theater of operations a supply chain manager's goal should be to have enough of the right materiel on hand and the capacity to handle future demand. To support this goal, you must align metrics or controls that will allow you to determine if you are meeting or deviating from that goal. Some metrics to support your goal might be—

- ❑ Equipment and materiel due-ins by days outstanding. What do you not have, and how long has it been due in?
- ❑ Equipment on-hand ratings (measures capacity). Do you have what you are supposed to have?
- ❑ Personnel on-hand ratings (measures capacity). Do you have the personnel you are supposed to have?

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Army Ammunition Management Information System Challenges

BY MAJOR JAMES M.L. COOK

Commonly considered the genesis of the current transformation in military logistics automation and asset visibility, the “iron mountain” stockpiles of Operations Desert Shield and Desert Storm revealed tremendous shortcomings in the logistics community’s ability to accurately depict the location of supplies and services on the modern battlefield. The solution, Army total asset visibility, was originally one of the six tenets of the Revolution in Military Logistics. But it was also a Force XXI initiative aimed at automating, streamlining, and making more efficient and effective the management processes needed to sustain large combat formations in garrison and in battle.

However, that was 1990; Force XXI and the Army After Next have yielded to the Future Combat System (FCS) and its promise of a network-centric information system for battlefield command and control. Within the auspices of the Army enterprise solution and fully interoperable with the other services, FCS promises spinoffs in technologies, systems, platforms, and processes with the potential to revolutionize the way that the United States fights future wars. Yet with all this promise, our progress toward these goals is still hampered by dated and antiquated information systems, stovepiped logistics systems, and a patchwork of middleware solutions used to integrate Standard Army Management Information Systems (STAMISs) into a common operational picture.

Ammunition management is no exception. The separation of the two main ammunition STAMISs, the Standard Army Ammunition System-Modernization (SAAS-MOD) and the Total Ammunition Management Information System (TAMIS), illustrates the challenges faced across the services in the pursuit of an integrated logistics common operational picture.

Problems with SAAS-MOD and TAMIS

SAAS-MOD is used for operational stock record accountability and inventory management at materiel management centers, ammunition supply points, and ammunition transfer and holding points. TAMIS is used for forecasting, allocating, and requisitioning training ammunition requirements. SAAS-MOD and TAMIS are independent systems connected through requisitioning processes (which normally do not pass higher than the theater sustainment command level) to the Department of the Army G-3, -4, -7, or -8 for aid in the procurement process.

Anecdotal accounts from Afghanistan and Iraq have illustrated that the communications challenges between these two STAMISs are normally created by a lack of operator proficiency, inadequate or nonexistent communications infrastructure at remote locations, and the emphasis on manual means of inventory management, such as the use of spreadsheets. Such problems were claimed to be common throughout certain remote areas of Iraq during Operation Iraqi Freedom and were primarily due to limitations in the communications infrastructure as well as communications support required to operate the required STAMIS.

Using TAMIS for Operational Ammunition

While deployed to Operation Iraqi Freedom 06-08, the 13th Expeditionary Sustainment Command’s combat service support automation management officer (CSSAMO) developed a user’s guide to help SAAS-MOD operators configure the system to accept Internet

Soldiers unpack ammunition and prepare it for use during predeployment training at Fort Riley, Kansas. Ammunition management for training ammunition is normally conducted through the Total Ammunition Management Information System-Redesigned (TAMIS-R). If the same type of ammunition is for use in operational missions, it is managed under the Standard Army Ammunition System-Modernization (SAAS-MOD).



protocol (IP) routing, Department of Defense activity address codes (DODAACs), passwords, and permissions across multiple networks. Within the 13th Expeditionary Sustainment Command's area of operations, the CSSA-MO found that TAMIS, which was normally used for forecasting and requisitioning only training ammunition, was also being used for operational ammunition.

SAAS-MOD integrated the requisite data fields, financial data, and requisitions, but not without some challenges to IP configuration between the very small aperture terminal satellite system and the established Unclassified but Sensitive Internet Protocol Routing Network. For example, when requisitioning North Atlantic Treaty Organization standard 5.56-millimeter rounds, the nature of use for the rounds determines the method of requisition, source of funding, and amount of allocation—even in a combat theater. Ammunition used for training is requisitioned through TAMIS, and the same type of ammunition used for an operational mission is requisitioned through SAAS-MOD.

Improvised Management Control Processes

Because of the configuration complexities of the STAMISs needed for a commodity, frustrated operators, logisticians, commodity managers, and signal personnel—from the user level to theater level—resort to improvised management control processes. To further complicate the issue, ammunition procurement cycles follow the quadrennial Presidential terms of office and the Quadrennial Defense Review, which lead to the constitutionally mandated 2-year funding cycles and program objective memorandums. These program objective memorandums effectively place strategic ammunition procurement cycles at 4 years out from their current dates. The tactical and operational frustrations caused by this cycle limit an already inflexible sustainment process and emplace crucial constraints on the operational commanders' reach and stamina.

Army Total Asset Visibility

In 1995, the logistics community believed automatic information technology to be the answer to gaining and maintaining Army total asset visibility. As a part of this concept, radio-frequency identification (RFID) tags would be able to provide the near-real-time location of assets and commodities transiting the transportation grid.

Today, RFID interrogators increasingly dot the landscape and satellite-based systems provide pinpoint accuracy with systems such as Blue Force Tracker. However, logisticians are still trying to determine how to integrate not only ammunition STAMISs but also other information systems to create a logistics common operational picture for the commander to enable rapid, accurate decisionmaking capabilities. At this point, only the Battle Command

Sustainment Support System (BCS3), which connects various STAMISs and command and control systems, is accomplishing this goal.

Focusing on logistics management processes and information technology systems will enable force structure realignments or reductions that can actually increase mobility and effective force utilization as the Army struggles with frequent deployment cycles and personnel shortfalls in its sustainment forces.

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(continued from page 39)

- ❑ Communications status with suppliers and customers (ensures that no operation falls victim to time).
- ❑ Critical items at zero balance (measures critical inventory).
- ❑ Number of customer demands (measures capacity required to support).
- ❑ Time awaiting transportation (ensures you do not fall victim to time).

Supply chain managers must have a good idea of where they are and where they hope to be. Choosing the right controls and metrics is a critical component of this process. The proper metrics will allow supply chain managers to quickly assess their status and apply the resources or supply chain buffers needed to better meet the organization's strategic goals.

A key component in choosing the right metrics is understanding where an organization is and where it needs to be. Having this understanding is the major difference in being a proactive manager with a vision and being a reactive manager who constantly has to shuffle work priorities. In order to avoid a future crisis, you must understand the expectations of your organization and incorporate the appropriate metrics to guide and drive performance.

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A Case for Contracting in Today's Environment

BY MAJOR JOHN P. KILBRIDE

Niccolò Machiavelli, an Italian writer and philosopher, demonstrates how governments of previous centuries were intensely opposed to the use of military contractors in the following quote from his political treatise *The Prince* (translated by Wayne A. Rebhorn):

The mercenaries and auxiliaries are useless and dangerous, and if anyone has a state founded on the arms of mercenaries, he will never be stable or secure, because they are disunited, ambitious, without discipline, disloyal; bold among friends, among enemies cowardly; without fear of God, without faith in men; and your ruin is deferred only as long as the assault is deferred; and in peace you are plundered by them, in war by the enemy.

This argument is still prevalent today among those who are opposed to contractors on the battlefield, although few express their disdain for military contracting with as much fervor as Machiavelli.

Generally, opponents categorize military contractors as self-serving individuals beholden only to the highest bidder and not necessarily to the ideals of their country. While I find it hard to disagree that a military contractor can bring a difficult and often unclear dynamic to a dangerous battlefield—especially when acting as security forces for foreign investors or international corporations—I do see the merit of using military contractors in roles that support national interests and military objectives.

Contractors who serve as logistics, administrative, and technical advisers in support of our military's efforts under the direction of the ground commanders are valuable. In fact, I believe that the continued use of contractors to support operations is a crucial enabler that allows the military to allocate greater combat power to accomplishing the mission, reducing the risk to Soldiers and the cost to the United States.

Increase in Combat Power

Today, the U.S. Armed Forces are smaller than they were 20 years ago. They are fighting two major conflicts in two different countries, and the service most affected is the Army. Currently, some 1,090,000 Soldiers are on active duty, including 550,000 who are activated from the Reserve component. Most of these Soldiers are either deployed or preparing to deploy in support of missions in Iraq and Afghanistan. This poses an incredible predicament: the Army lacks the Soldiers to conduct all of its required operations. The solution of outsourcing logistics, administrative, and technical support has helped to remedy this troop-to-task dilemma.

From my own experience, contractors have provided the Army with the ability to focus and commit combat power toward offensive and stability operations. In Afghanistan, contract workers provided a fuel truck regularly, saving Soldiers 9- to 11-hour trips to Bagram Air Base from the base camp in Paktika province. As a com-

A "jingle truck" delivers tires to a customer in Wardak province, Afghanistan. Local contractors, such as jingle truck drivers, allow Soldiers to focus on security missions instead of logistics missions. (Photo by SGT Russell Gilchrest, Joint Combat Camera Afghanistan)





A contractor fixes a mud flap on a medium lightweight truck at the maintenance facility in Camp Arifjan, Kuwait, as part of the retrograde operation for drawdown in Iraq and buildup in Afghanistan. (Photo by SPC Brandon Babbitt, 203d Public Affairs Detachment)

pany commander, the fact that I did not need to commit men and resources to complete logistics and administrative tasks enabled a greater focus on the combat mission and the projection of more combat power into the area of operations without interruption. This increased combat power improved the safety, stability, and security of the environment.

Reducing Risk

The use of contractors reduces the exposure of Soldiers to unnecessary risk. Our enemies are thoroughly familiar with what types of vehicles we drive, what weapons capabilities we have, and how often we conduct routine logistics and administrative missions. For these reasons, contractors are important. Often, local national contractors are able to pass through potentially dangerous areas unnoticed to deliver needed fuel and supplies to U.S. bases.

Indeed, some missions require U.S. Soldiers to ensure that contractors are able to move supplies safely and unhindered. (This is certainly the case in Iraq, where contractors conduct logistics resupply convoys from Kuwait north to Bagdad with U.S. security elements.) However, in most cases, the contractors will knowingly accept risk for the right price. The decision contractors make to accept risk provides coalition combat forces with the ability to aggressively and diligently project more forces against the enemy and reduces the risks posed to convoy operations.

Reducing Cost

The cost of outsourcing logistics and administrative operations reduces the overall cost to taxpayers. On the surface, contracts appear to entail large costs.

In fact, many taxpayers take issue with the excessive choices provided to Soldiers in a dining facility, calling the variety “an unnecessary cost.” Others believe technicians who fix air conditioners or drive supplies between bases are excessively overpaid.

However, the U.S. Government pays one cost, and how contracted companies dole out their salaries and cover messing costs is irrelevant to some degree. The military is not responsible for feeding, insuring, and paying disability or pensions for contractors, as it would be if Soldiers were performing these missions. Further cost savings are realized in not enlisting, training, equipping, and deploying Soldiers to perform tasks that can be contracted. In the end, it does become more cost effective to employ contractors for specific functions.

The argument that military contracting is unnecessary is unfounded; contracting brings an increased focus of combat power in theater, reduces the risk to Soldiers, and reduces the cost to the Government. Monitoring through additional oversight and periodic reviews ensures that the objectives of contracts are met while alleviating concerns of fraud, waste, and abuse. Arguably, there are merits and demerits to using contractors, but there is value in outsourcing.

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What DOD Logisticians Should Know About the Coast Guard

BY LIEUTENANT COLONEL JAMES C. BATES, USA (RET.),
AND CHIEF WARRANT OFFICER 4 STEPHEN W. BROWN, USCG (RET.)

With the ever-increasing role that the U.S. Coast Guard plays in deployments overseas and its vital role in homeland security, it is important that Department of Defense (DOD) logisticians be aware of the Coast Guard's missions, capabilities, and means of logistics support.

The Coast Guard is one of our Nation's five armed services and is a major component of the Department of Homeland Security. It frequently works alongside the Navy, Marine Corps, Army, Air Force, and civilian agencies of the Federal Government, including U.S. Immigration and Customs Enforcement, the Drug Enforcement Administration, and the Federal Bureau of Investigation. Its motto is *Semper Paratus*, which means "Always Ready."

Yesterday and Today

The origin of the Coast Guard dates back to 4 August 1790, when the first Secretary of the Treasury, Alexander Hamilton, formed the Revenue Marine (later renamed the U.S. Revenue Cutter Service) to enforce the Nation's customs laws. On 28 January 1915, the Revenue Cutter Service merged with the U.S. Life-Saving Service (which had been formed in 1848) to create the U.S. Coast Guard. The U.S. Lighthouse Service (which was formed in 1789) was incorporated into the Coast Guard in 1939, and the Bureau of Marine Inspection and Navigation (originally established as the Steamboat Inspection Service in 1838) was added in 1946.

The Coast Guard was part of the Department of the Treasury until 1967, when it was moved to the new Department of Transportation. It transferred to its present home in the Department of Homeland Security in 2003.

Today, the Coast Guard has approximately 42,200 active-duty service members, 8,100 reservists, and 7,700 full-time civilian employees. The Coast Guard Auxiliary comprises about 30,000 civilian volunteers who wear uniforms similar to those worn by Coast Guardsmen. They assist the Coast Guard with noncombatant and non-law enforcement missions, conducting boating safety instruction in the classroom, performing vessel safety checks, and assisting with on-the-water operations that facilitate public boating safety.

On an average day, the service saves 14 lives, assists 98 people in distress, conducts 74 search-and-rescue missions, completes 31 safety and environmental examinations of foreign vessels, performs 18 safety inspections of commercial fishing vessels, conducts 24 marine casualty investigations, issues 102 certificates of inspection to U.S. commercial vessels and 375 credentials to qualified merchant mariners, services 135 aids to navigation (such as buoys and fog signals) and corrects 23 discrepancies, interdicts 17 illegal migrants at sea, seizes over 1,000 pounds of illegal drugs, administers 25 International Ship and Port Facility Security vessel exams, escorts 20 large vessels, boards 193 ships or boats, inspects 53 hazardous materials containers, and responds to 12 oil and hazardous materials spills.

Coast Guard Missions

In addition to national defense, the Coast Guard performs four other fundamental roles: maritime safety, maritime security, maritime mobility, and protection of natural resources. In its maritime safety role, the Coast Guard reduces death, injury, and property damage associated with water transport, fishing, and recreational boating and conducts search and rescue missions.

In carrying out its maritime security mission, the Coast Guard protects America's coastal borders by halting the flow of illegal drugs, illegal immigrants, and contraband, illegal fishing, and other illegal activities within the U.S. maritime domain. The Coast Guard facilitates maritime mobility by eliminating interruptions and impediments to the efficient movement of people and goods. It conducts icebreaking missions and ensures the proper placement and functioning of aids to navigation. Lastly, the Coast Guard seeks to reduce environmental damage and degradation to our national resources.

The Coast Guard is the only armed service that has general law enforcement authority under U.S. Code Title 14, Section 89. The other services are limited in their domestic law enforcement activities by the Posse Comitatus Act of 1878. Members of the Coast Guard can enforce Federal laws on waters over which the United States has jurisdiction. They can also board, inspect, search, and seize any vessel subject to the jurisdiction of the United States. Moreover,



This is an aerial shot of the bridge onboard USCGC Jarvis off the coast of Hawaii. The Jarvis is a 378-foot high endurance cutter that is home ported in Honolulu.

the Coast Guard can board a foreign-flagged vessel in international waters if the associated government grants approval. The Coast Guard has the authority to interdict and board stateless vessels (those that fail to display a flag in accordance with international convention) or vessels that illegally change their country-of-origin flag.

Cutters, Boats, and Aircraft

In the Coast Guard, vessels that are 65 feet or longer are classified as cutters, and those shorter than 65 feet are classified as boats. The service's largest ships are its three icebreakers, which are about 400 feet long, and its Legend-class cutters. The USCGC *Bertholf*, which was commissioned on 4 August 2008, is the first of eight planned Legend-class cutters. Each will be about 418 feet long and designed to screen and target suspect vessels; they also will conduct ship verification procedures of suspicious vessels before they arrive in U.S. waters.

The service also has 12 high endurance cutters (378 feet long), 29 medium endurance cutters (210 to 270 feet long), 3 patrol coastal ships on loan from

the Navy (179 feet long), about 82 patrol boats (87 to 110 feet long), approximately 38 buoy tenders (100 to 225 feet long), around 28 buoy and construction barges (65 to 225 feet long), 9 icebreaking tugboats (140 feet long), 11 harbor tugboats (65 feet long), and approximately 1,400 boats.

The Coast Guard has about 211 aircraft, both fixed wing (HC-130 Hercules, HU-25A Guardian, and C-37 Gulfstream airplanes) and rotary wing (H-65 Dolphin, HH-60 Jayhawk, and MH-68A Stingray helicopters).

Reorganization

The Coast Guard is modernizing its organizational structure. Its basic structure has been similar to the Navy fleet structure, with a Pacific Area and an Atlantic Area. However, it is realigning its forces under a Deputy Commandant for Operations (DCO), Deputy Commandant for Mission Support (DCMS), Coast Guard Operations Command (OPCOM), and Coast Guard Force Readiness Command (FORCECOM).

The DCO manages all operational programs, the DCMS oversees acquisition and life-cycle logistics

support for all systems, OPCOM oversees mission execution (subsuming the two area commands), and FORCECOM oversees all readiness capabilities.

The Coast Guard recently modernized its headquarters into the Napoleonic staffing structure that the other services employ: CG-1 (human resources), CG-2 (intelligence and criminal investigations), CG-4 (engineering and logistics), and so on.

Field Operations

As mentioned previously, the Coast Guard currently has two operational area commands: Atlantic and Pacific. Each of the areas is further broken down into geographical districts, each commanded by a rear admiral: District 1 (Northeast Atlantic), District 5 (Mid-Atlantic), District 7 (Southern Atlantic), District 8 (Gulf Coast and Western Rivers), District 9 (Great Lakes), District 11 (Pacific Coast), District 13 (Pacific Northwest), District 14 (Hawaii and Guam), and District 17 (Alaska). The districts are further divided into 2 to 7 sectors each, for a total of 35 sectors, each commanded by a captain (O-6). After modernization, the Atlantic and Pacific Areas will be placed by OPCOM. OPCOM will have oversight of all Coast Guard district commanders.

The service previously had two Maintenance and Logistics Commands (MLCs), one for the Atlantic area (MLCANT) and one for the Pacific (MLCPAC). MLCs provided electronics, engineering, financial management, health and safety inspections, legal programs, and personnel support. They supported

both continental United States (CONUS) and outside CONUS (OCONUS) Coast Guard forces with repair parts shipments, drydock arrangements, and engineering and logistics support while in port.

After modernization, the MLC functions will be centralized under FORCECOM. Five recently established centers will report to the DCMS: Aviation Logistics Center; Surface Forces Logistics Center; Shore Infrastructure Logistics Center; Command, Control, Communications, Computers, and Information Technology Service Center; and Personnel Service Center.

Deepwater

In addition to modernizing its organizational structure, the Coast Guard is updating and replacing its aging ships and aircraft and improving its command and control and logistics systems. Nicknamed Deepwater, the Integrated Deepwater System is a multi-year effort that is the largest acquisition program in Coast Guard history. The acquisitions include three classes of cutters, small boats, fixed- and rotary-wing aircraft, and unmanned aerial vehicles.

Supporting National Security

According to the service's capstone document, The U.S. Coast Guard Strategy for Maritime Safety, Security, and Stewardship (published on 19 January 2007), Coast Guard capabilities will be further integrated with DOD, the combatant commanders, and the other services to ensure that the Coast Guard can respond to

emerging national security needs, including homeland defense and expeditionary operations.

Currently, six 110-foot long cutters are part of a contingency operation, Patrol Forces Southwest Asia, that patrols Southwest Asian waters in conjunction with the Navy's Fifth Fleet. Coast Guard forces assigned to this operation oversee aids to navigation and provide oil platform security. Coast Guard vessels also participate in Maritime Partnership Program operations in the Black Sea and African waters such as the Gulf of Guinea.

Coast Guard container inspection training and assistance teams (CITATs) and redeployment assistance and inspection detachments assist the other services during deployments and redeployments, respectively. Their involvement with container loading helps to ensure expeditious processing at

A Coast Guard 47-foot motor lifeboat speeds through raging surf off the coast of Washington during a training exercise. This exercise is performed on a regular basis for all Coastguardsmen wishing to pursue a qualification as a heavy weather coxswain.



ports of embarkation and debarkation in countries such as Iraq and Afghanistan. (The CITAT can be reached at (405) 954-8985 or CGI-PF-CITAT_MSG@uscg.mil.)

For many of its deployed missions, the Coast Guard receives contracting support for husbanding services from the Navy's Commander, Fleet and Industrial Supply Center, and for fuel support from the Defense Logistics Agency's Defense Energy Support Center. (Husbanding services provide logistics support to vessels while they are in port.)

The Coast Guard is an integral member of the Joint Interagency Task Force-South (JIATF-S), a component command of the U.S. Southern Command. JIATF-S is currently commanded by a Coast Guard rear admiral, who oversees interagency counterdrug operations in the Caribbean Sea, the Gulf of Mexico, and the eastern Pacific. JIATF-S is an excellent example of joint integration: It includes several U.S. military services, agencies of the Federal government, and multinational partners.

Deployable Operations Group

Although not a member of JIATF-S, the Deployable Operations Group (DOG), a force of around 3,000 personnel formed in 2006, contains some of the Coast Guard's most deployable forces. The DOG includes 8 port security units, 12 maritime safety and security teams, 2 tactical law enforcement teams, 3 national strike teams, 1 National Strike Force Coordination Center, and 1 maritime security response team.

The port security units provide waterborne security and defense force protection for strategic shipping and critical port facilities at the endpoints of sea lines of communication. They serve as the primary inshore and harbor interdiction response force. The maritime safety and security teams provide specialized maritime law enforcement and antiterrorism and force protection capabilities to enhance security at strategic seaports. The tactical law enforcement teams conduct drug interdiction missions and maritime interception operations.

The national strike teams coordinate the Federal response to the discharge or threat of discharge of oil, hazardous substances, pollutants, or contaminants into the environment. The National Strike Force Coordination Center oversees the three national strike teams. The maritime security response team provides specialized maritime law enforcement and counterterrorism, conducts vessel interdiction, performs medium- and



USCGC Jarvis plunges through 40-foot swells while on a search and rescue case in the Bering Sea, 100 miles south of St. Paul Island, Alaska.

high-risk boarding of vessels, and detects and surveys potential weapons of mass destruction.

The DOG is currently updating its deployment procedures to adhere to those mandated by the Joint Operation Planning and Execution System. Similar to the Navy's efforts with the Naval Expeditionary Combat Command, the DOG will serve as a force deployment and execution model for the rest of the Coast Guard.

Whether DOD units are in CONUS or deployed overseas, chances are ever increasing that they will work with or be assisted by the U.S. Coast Guard. Because of all the varied missions Coast Guard members perform and their ability to aid the other services and interagency partners with a multitude of coastal-related support, it is no doubt a smart idea for all service members to develop solid working relationships and friendships with Coast Guardsmen located within their areas of operations.

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THE AUTHORS WISH TO THANK COMMANDER BRENDA K. KERR, USCG, FOR HER ASSISTANCE IN WRITING THIS ARTICLE.

Excess Equipment: An Embarrassment of Riches

BY CAPTAIN DAVID N. DANFORD

My battalion commander once asked me about several pieces of equipment that he had noticed were down for faults and were on our not-mission-capable reports, indicating a lack of proper maintenance and care by operators. Questions like these are not uncommon for maintenance control officers, but this one highlighted a specific issue that is all too common across Iraq. What my battalion commander did not realize was that the equipment in question was excess theater-provided equipment and that we lacked dedicated operators for it.

Although my battalion, along with almost all others, could certainly improve its –10-level maintenance, this situation was a perfect example of how excess equipment inhibits a unit's ability to conduct proper maintenance. Before any issues about lack of proper care can

be addressed in a unit, the issue of property excess must be addressed.

The amount of excess equipment in my battalion bordered on fraud, waste, and abuse, especially considering the difficulty units in the continental United States have in finding the right equipment to conduct realistic training. This excess is strategically irresponsible in view of the overbearing burden it places on units and company commanders and the inevitable problem of withdrawing from the current mission.

Acquiring Excess Equipment

The equipment that the battalion commander asked about was several theater-provided AN/PAS–13B thermal weapon sights (the older, larger version of the AN/PAS–13D night-vision devices that my unit received

A U.S. Soldier helps an Iraqi Army (IA) mechanic repair a newly purchased, but under-supported, American-made F–350 truck used by the IA. IA units often own fleets of mismatched vehicles from multiple countries without real logistics support. Ironically, as excess builds up on U.S. forward operating bases, U.S. maintenance personnel find themselves in similar situations, trying to maintain outdated, unused, and low-priority equipment without proper training or support.



before it deployed). The newer, lighter devices meant we had no need for the older ones. Such pieces of excess equipment often lack the right carrying cases, and they are rarely maintained. For example, in one instance, my unit had several hundred pairs of night-vision goggles (PVS-7Bs, PVS-7Ds, and even PVS-7As) that were packed tightly into storage boxes only to be counted during inventories.

Unneeded theater-provided items that my unit acquired when it arrived included sewing trailers and Viper generators that it did not need or even have anyone to operate them. The unit also received older-model close-combat optics, of which the unit already had enough for each Soldier to have two. None of this equipment had the right basic issue items or technical manuals, and the unit had no operators with the time or reason to fix these discrepancies. The companies simply had more equipment than they could properly maintain.

Hand Receipt Issues

Across the Army, this problem is exacerbated by the use of arms-room hand receipts as catchalls for excess that could not reasonably be issued to platoons or subsections on their hand receipts. In theory, if a unit had the right amount of equipment for its users and accounted for property appropriately, all equipment would be signed down to platoons or users in a way that promotes ownership and custodial responsibility, which would enhance the unit maintenance program. But this is not feasible because of the amount of excess equipment that units have.

So, instead of platoons owning all equipment and maintaining it with a proper maintenance schedule, young E-3 armorers (who are often also the commanders' drivers or have some other job) are stuck with shipping containers full of extra equipment that is not stored properly, does not have the right basic issue items, and is never checked. These Soldiers often lack the technical manuals, training, time, and tools to maintain their equipment properly. At best, they hope not to lose anything and to make it accessible. I have also seen the practice of having separate supply; nuclear, biological, and chemical; communications; and arms-room hand receipts. (Only the arms-room hand receipt makes any sense in rear areas.)

Systemic Problems

I believe that these are problems of a system that uses a semi-modification table of organization and equipment (MTOE)-oriented equipment fielding process, in which new equipment is being upgraded, purchased, and fielded far faster than it has been for the last 40 years.

Commanders are constrained by MTOEs that no longer apply, especially in theater. The MTOE system implies that only small amounts of excess exist because

equipment must be authorized for issue against a table of equipment. If only a small amount of excess exists as the MTOE system expects, the process in place to turn in excess is acceptably slow and reaches all the way to the corps level. High standards of justification are required because, under the MTOE authorization system, commanders should only have the property that the Army had already deemed necessary. However, the amounts of excess are not small, and the system in place for turning in excess property is too slow and has equipment turn-in standards that are too high.

While commanders remain in an MTOE system, the Department of the Army (DA) is not so constrained. DA has learned to respond quickly to political, strategic, and technological needs, and it has no constraints on issuing equipment. It took the Army almost 20 years to acquire the "big 5" weapon systems of the 1980s (the AH-64 Apache attack helicopter, M1 Abrams main battle tank, M2/3 Bradley infantry/cavalry fighting vehicle, Patriot air defense missile, and multiple launch rocket system).

However, the Army purchased the Stryker in less than 4 years and is now fielding multiple types of mine-resistant ambush-protected vehicles faster than the Defense Logistics Agency can find parts suppliers. New radios, binoculars, sights, and night-vision devices are available almost every year, but units cannot figure out how to retrograde the equipment being replaced as quickly as they receive the replacements.

Similar to the Army during World War II, Soldiers are receiving equipment after they have already reached the front, with the only concern being time—not training, support, or even the technical manuals that are necessary for a sergeant to maintain his Soldiers' equipment properly. I have learned that any Soldier should be able to maintain any piece of equipment if provided a technical manual and proper supervision by a noncommissioned officer. The prerequisite is that each piece of equipment be owned and used by a person, which is not true in cases of extreme excess.

Commanders on the ground are faced with the hard decision of either focusing on the mission and using only the equipment they need or thinking about the big picture and maintaining or turning in their excess. If they want to do anything besides let their excess go to waste, commanders must make excess and secondary systems maintenance a priority. This takes almost the complete attention of the executive officer in most companies, especially the bigger forward support companies and headquarters and headquarters companies.

How Do We Fix It

One executive officer wrote to me on the subject of excess. He said that the excess problem was so large in his unit that all of his attempts to get rid of the items did not amount to much. He felt that the



A Soldier repairs an Army generator on Contingency Operating Base Adder in southern Iraq. Many of these generators are theater-provided equipment that units receive once they arrive in country. Most of these generators are received as excess, are undermaintained, and lack technical manuals. Units are often forced to use Soldiers who are not generator mechanics to maintain this excess property or leave it unusable and taking up storage space.

solution to the problem had to come from DA in the form of the mobile redistribution team (MRT). The MRT should go to units to determine what they need and then recommend cuts to the brigade commander. Units should have to justify maintaining items recommended for disposal.

I feel his recommendation is valid. The energy and expertise to manage, move, and fix all of this equipment is beyond the capacity of junior officers learning to manage a company's worth of equipment. The control of the moving parts during a turn-in is spread out among far too many players who have other tasks to fill their days. However, specialized teams that are properly trained and staffed to conduct all of the steps required for a turn-in (evaluation, accountability, movement, storage, and redistribution) could focus on the turn-in task and free the line units from the crushing weight of excess equipment.

If MRT visits were done every rotation, perhaps at the first quarter mark, different units with different compositions and tactical requirements could better tailor their equipment to how they are fighting the fight. Companies with better deployment MTOEs (basically crafted by each unit each time) would be more agile, responsive, and better custodians of their equipment.

Another option would be to create a class VII (major end items) warehouse at each major installation. Units could both turn in and draw (or request) the equipment they need for their missions at specified coordinated

intervals (not every day). These warehouses would maintain some inventory, and crosstalk with similar warehouses in theater would help in the reallocation process across the theater. If a piece of equipment sits for a specified time (for example, 6 months) without being used, it should then be processed for return to pre-positioned stock or turn-in. This time period could be adjusted based on the movement of troops or the amount of time left until the end of the mission.

Certain pieces of equipment, like PVS-7As, which should be out of the Army inventory altogether, could be identified quickly and immediately retrograded. However the process is run, all of this excess would be stored by those who know best how to account, maintain, supply, and move this equipment.

We are already using a warehouse system, but instead of depots in which equipment is accessible, we use unit motor pools and containers, which provide almost no accessibility, visibility, or maintenance of excess equipment.

In the end, the question is one of both mission readiness and custodial responsibility. The result of fast fieldings and flexible MTOEs is that our Soldiers are armed with the best equipment at the earliest possible date—something we should not take away. This fast fielding also results in large amounts of excess. With every new item the Army fields, units need to find ways to remove the old equipment. The Army should keep improving how fast it can adapt and field necessary equipment, but it must also improve accountability procedures and retrograde systems.

Companies cannot effectively maintain all of their excess equipment, and units are devoting large amounts of time to property accountability and maintenance. All of this will be much easier if units can get rid of their excess. The results of the practices inherent in a tired Army at war, where operational need superseded logistics support, must be addressed. If not, I do not envy the logisticians who will tackle this problem in the near future as we take on the monstrous task of withdrawing our used-up, outdated, pre-positioned stock and supplies from the theater.

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Yes, Horatio, It's Time to Rename the AG Corps

BY LYLE N. ADAMS

In the middle of our conversation about human resources (HR), a fellow faculty member at the Army Command and General Staff College blurted out, “HR, personnelists, adjutant general [AG] . . . or whatever you AG types are calling yourself these days!” That got me thinking, is the Adjutant General branch due for a name change or at least an upgrade? I think so. Specifically, I believe the Adjutant General Corps should be officially renamed the Human Resources (HR) Corps.

Aligning the Corps With Current Doctrine

The Army has already renamed the majority of its personnel agencies and career fields to align with the term “human resources.” The Personnel Command was reflagged as the Army Human Resources Command. Field Manual (FM) 12–6, Personnel Doctrine, was renamed FM 1–0, Human Resources Support. The future personnel database is named the Defense Integrated Military Human Resources System. The new theater-level deployable agency is the human resources support center. Theater and expeditionary support commands and sustainment brigades contain HR operations cells or branches. The personnel workhorses of the organizational structure are called HR companies. Military occupational specialty (MOS) titles also reflect the term “HR.” For example, MOS 42A is a human resources sergeant or specialist, and MOS 42F is a human resources information systems management specialist.

The Army’s premier doctrinal source for personnel support, FM 1–0, contains the words “human resources” 93 times and the acronym “HR” 986 times, compared to 12 and 10 appearances for the words “adjutant general” and the acronym “AG,” respectively. The HR to AG ratio within the document is a combined 1,079 to 22. Interestingly, FM 1–0 codifies the 10 most important AG missions as HR core competencies.

In the private sector, HR support encompasses both personnel pay and personnel management. In modeling that holistic corporate approach to HR, Army doctrine recently shifted the personnel pay functions from the finance community and placed them under the Army’s HR structure. In the spirit of following such corporate trends, the Army should continue to formalize the use of the term “human resources” (in lieu of “adjutant general”) in its doctrine, organizations, business practices and,

most assuredly, in the name of its professionally aligned regimental corps affiliations.

Renaming the AG Corps “the HR Corps” will also end the AG Corps’ unflattering connection to pure “adjutant” duties. Units no longer officially have adjutant positions on their manning documents. Instead, today’s unit manning documents contain HR officer positions, so any effort to rename the corps as HR versus AG would serve the professional HR community appropriately.

Honoring Horatio Gates

Some argue that the corps’ name must remain aligned with Horatio Gates, the Adjutant General to General George Washington’s Continental Army, in order to preserve appropriate lineage. But many Army corps and regiments have historical affiliations with historic personalities without actually taking on those personalities’ duty titles. For instance, the Field Artillery Corps has a historical affiliation with Saint Barbara and celebrates her through an honorary society, the Order of Saint Barbara.

The newly renamed Human Resources Corps Regimental Association would continue to award gold and bronze Horatio Gates Medals for significant achievements, service, and leadership. Modernizing the name of the corps to the HR Corps does not automatically imply that the corps is not proud of its founding roots or its place in history. On the contrary, AG Soldiers hold Horatio Gates in high esteem. We consider Gates our patron saint and will continue to do so, regardless of the name of the corps.

The U.S. Army is irrefutably the largest corporate organization in the world, yet its personnel management lexicon is stuck in time. The name “Adjutant General” has served the corps and the Army admirably, and the full wealth of AG historical lineage endures. It is time, however, for the AG Corps to raise the centerpiece of personnel transformation, cut the ribbon on the grand opening of the HR era, and give the corps the title that fully aligns with what the Army’s HR community does every day in support of Soldiers, civilians, retirees, and their families. Yes, Horatio, the time has come.

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Ammunition Management: A Joint or Army Function?

BY COLONEL THOMAS S. SCHORR, JR.,
AND COLONEL KENNETH DEAL

Without question, “the arsenal of democracy,” as President Franklin D. Roosevelt characterized the U.S. industrial base, has acquitted itself marvelously in supporting U.S. warfare since the start of World War II. However, there is also no question that the U.S. Government’s organic ammunition industrial base is filled with World War II-vintage production equipment (leavened with a smattering of Vietnam War-era machinery) and that this Government equipment is actually considered the “modernized” production equipment in the overall domestic base. How can the United States be considered the world leader in industrial capabilities and yet allow the organic ammunition base to degrade to the point that all U.S. energetics, small-arms ammunition, and larger-caliber ammunition are produced or assembled on the very best equipment that our great-grandparents could make?

The overall history of how the ammunition base arrived at this juncture is too large a story for this article. Instead, our timeframe will be the post-Cold War era since 1992. The Army Materiel Command (AMC) has been the major command supervising the ammunition base during that time. Based on our experiences, we believe that munitions management should be moved away from sole Army management, specifically AMC, and placed in the joint community.

The Program Executive Office (PEO) Ammunition works directly for the Assistant Secretary of the Army for Acquisition, Logistics, and Technology. We recommend that overall service munitions management be moved directly under the Deputy Under Secretary of Defense for Acquisition, Technology, and Logistics (DUSD [ATL]) to provide a real view of munitions requirements across all of the services and that munitions item management be placed directly under the Defense Logistics Agency (DLA).

Reorganization and Reductions

During the 1990s, the Army and AMC concluded that the munitions base was much too large, too expensive, and too inefficient and successfully worked to break it into three basic parts:

- AMC-owned munitions item management, safety management, and production, load-assemble-pack, and storage facilities.
- A PEO responsible for the overall acquisition of munitions.
- Research and development facilities.

AMC recommended reductions in munitions facilities and force structure, both military and civilian. This downsizing resulted in the elimination of duplicate capabilities and compelled the ammunition industrial base to do away with redundant laid-away plants and depots. But downsizing also severely handicapped the base in its ability to produce munitions for national emergencies and to develop military leaders with expertise in munitions operations.

It is important to note that during the time of downsizing, the meager and often underfunded ammunition requirements funding was often raided during the year or “served as a bill-payer for other Army Programs.”¹ Colonel Schorr unfortunately witnessed this happen on a regular basis while serving as the commander of Savanna Army Depot in Illinois and the Kansas Army Ammunition Plant.

In addition to reducing industrial capabilities, the overall force structure of the Army was cut during the same period. This downsizing eliminated many of the noncommissioned officer and executive officer (XO) positions throughout the munitions base and led indirectly

¹ Steven Mullen, “Ammunition Readiness: Current Problems and Future Implications for Army Transformation,” Association of the United States Army, Landpower Essay No. 02-1, February 2002.

to² the commercial contracting of ammunition supply points (ASPs).³

Loss of Uniformed Expertise

The Army's downsizing or eliminating of the uniformed leadership of the munitions program has had a disastrous effect on overall munitions officer management at the tactical, operational, and strategic levels. Munitions managers are no longer required in the continental United States (CONUS) because AMC has contracted out most CONUS ASPs, and many overseas sites have been contracted out or are operated by foreign employees.

The tactical level of the Army has lost its expertise in munitions management—and munitions is arguably the most important supply commodity on the battlefield. The Ordnance Officer Basic Course used to be divided into munitions and maintenance phases, with the munitions portion of instruction lasting for months. That is no longer true; now, munitions instruction lasts only 240 hours, and then only if the add-on courses offered online are included. To add insult to injury, munitions management instructors at the Ordnance School tell newly commissioned officers to avoid ammunition assignments if at all possible. The reason is that the contracting of most ASP operations leaves no promotion opportunities for new officers in munitions.

Contracting out the ASP mission has resulted in munitions personnel and leaders who have little or no hands-on experience in managing munitions or munitions-related systems. When young ordnance officers deploy to support brigade combat teams (BCTs) on the ground in combat operations, they quite often have little idea, other than what was taught in the initial 7 days of munitions school instruction, of what is required of them.⁴

Today, military personnel no longer have the basic skills or equipment to perform the tasks that have been privatized. "Unfortunately, in the rush to privatize, this problem has been ignored."⁵ In the end, combat commanders on the ground are left wondering what munitions services they can count on and whom they can trust. In the absence of experienced munitions handlers, they order much more ammunition than they really need for their operations.

When BCT commanders in a combat area ask questions of their munitions support officers, they want decisive answers, and they want support immediately. The failure of many munitions support officers to know their commodity leads many BCT commanders to lose faith in their munitions personnel and request

two, three, and sometimes four times their combat load of munitions. (A combat load is the ammunition needed to start and sustain combat operations for the unit's assigned weapon systems and designated mission.)

At the operational level, theater sustainment commands often use officers who have been force-aligned from other branches to manage ammunition. Fortunately, senior-level warrant officers often are onboard to help manage munitions forecasting, ordering, transportation coordination, port operations, storage operations, and issue, but that is not always the case. Many warrant officers have been forced into performing other staff officer duties out of necessity.

Munitions warrant officers are technical experts in their fields. While a senior munitions warrant officer certainly has the wherewithal to conduct operational planning and staffing officer duties, it is a waste of their expertise in munitions management to force them to spend time attending meetings, generating briefings, and attending to personnel business.

Too Much Ammunition in the Field

BCT commanders requesting and holding combat loads that exceed their unit needs affect overall theater munitions operations in several ways. First, within the theater, excess munitions transported to the BCT mean that ground convoys or aircrews are undertaking unneeded missions. These missions put transportation personnel and equipment in peril for no good reason.

Second, keeping munitions on the ground for units that will not need them prevents units that do need munitions from obtaining them. This is an important point because Operations Iraqi Freedom (OIF) and Enduring Freedom compete for munitions production. The industrial base cannot manufacture preferred precision munitions on a grand scale, nor can it afford to. Many preferred munitions, such as Hellfire missiles and 30-millimeter high-explosive dual-purpose rounds, and common items, such as caliber .50 armor-piercing-incendiary rounds, are in short supply and have had, or are currently under, controlled supply rates.

Third, munitions are expensive, have a specific shelf life, and must be maintained. Additional ordnance personnel must be deployed to account for and maintain excess munitions, and extra ordnance personnel are not available. Ordering and holding excess ammunition is fiscally irresponsible. The battlefield cannot afford commanders who simply order supplies they want rather than ordering supplies they require. This is not a criticism of commanders but of the bad advice they receive from poorly trained ammunition logisticians.

² Ordnance company deployments in the Persian Gulf War of 1990 to 1991 also left many installations without uniformed ordnance personnel to operate ASPs. Installations were forced to temporarily contract out this requirement until ordnance personnel could return from the war.

³ "Ammunition Field Expertise," Ammunition Logistics White Paper, Defense Ammunition Center, 2006, <<https://www.us.army.mil/suite/page/212150>>, accessed May 2009.

⁴ Ibid.

⁵ P.W. Singer, *Corporate Warriors: The Rise of the Privatized Military Industry*, Cornell University Press, Ithaca, New York, 2003, p. 162.

Lastly, munitions that are not used must be retrograded, renovated, or destroyed. At the time of this article, an estimated 65,000 tons of munitions were on the ground to support OIF alone. Munitions not required for current operations should be drawn down through expenditures. Munitions no longer required for operational support should be retrograded.

Elimination of Production Facility XOs

AMC's decision to eliminate the XO position at ammunition plants has meant that very few officers remain in service who have the skills needed to manage production facilities. None of the battalion-level officers currently commanding munitions production facilities have a munitions manufacturing, storage, load-assemble-pack, and fabrication background, and only one at the brigade level has such experience.

The skills needed to manage munitions facilities are learned on the job and not in school. That comment probably can be made about many manufacturing positions within the Department of Defense (DOD), but on-the-job experience is especially critical for munitions management.

For example, at the beginning of OIF, Lake City Army Ammunition Plant in Missouri was producing 350 million small-arms rounds annually and was ordered to begin producing up to 650 million rounds in support of anticipated operations. However, the plant was in such disrepair from funding shortfalls that the operating contractor could not meet production schedules. DOD was forced to buy small-arms ammunition from overseas companies to meet combat requirements. If AMC had not eliminated the XO positions from the plants, experienced commanding officers would have been available over the years, and those experienced officers could have easily identified contractor challenges and the needed fixes.

We are concerned that the creation of the Logistics Branch will result in officers who know a little about everything but have no depth of knowledge in any commodity. Missing the mark on class I food items may leave Soldiers hungry in combat, but missing the mark on managing munitions will limit battlefield commanders' options and could lead to combat defeats, reverses, and catastrophic accidents, such as the destruction of Forward Operating Base Falcon.⁶

XOs should be put back into the munitions base immediately to begin gaining manufacturing experience. Placing XOs in the base has several advantages. First, officers in the XO positions will gain a wealth

of knowledge in wholesale munitions operations, and their expertise will enhance the overall management of munitions. Second, they will have the ability to rotate in and out of Department of the Army and theater staffs and understand in detail the real needs of the services and combat commanders. Third, young officers in these positions will realize that they can have a future in munitions management.

Failure to Manage the Munitions Base

Overall Army management of the munitions base has been defined by poor management and neglect. Forty-nine critical points of failure have been identified within the munitions base, but a mitigation strategy is in place for only 23 of them.⁷ The Army by law is DOD's single item manager of conventional ammunition, and it executes this function through AMC's Joint Munitions Command (JMC). During the last 18 years, JMC has undergone 5 name changes, which have led to confusion among supported personnel and services, let alone logistics officers.

In a rush to cash in on the perceived peace dividend in the 1990s, many facilities in the munitions industrial base were realigned and closed. (That process continues today under base closure and realignment.) AMC was under pressure from the Army during this time to find savings. So, at the beginning of OIF, AMC offered up many munitions production facilities for closure and consolidation, which reduced the ability of the organic base to support munitions surge requirements if a major war were to be fought.

We recognize that maintaining excess production capacity is expensive, and the Government has historically been unwilling to bear such costs. However, "some US prime contractors are now down to sole-source suppliers [and sub-suppliers] for the majority of components and subsystems they buy rather than make, and there is some dependency on foreign suppliers."⁸

Planning Considerations and Foreign Buys

For U.S. military planners, a concern generated by current outsourcing trends is that their forces rely more than ever on the surge capacity of private sector firms. "Despite this, few operation plans (or contracts) consider the risks, and field commanders, unaccustomed to these vulnerabilities, often operate unaware."⁹

Worse, basic munitions processes of national importance, such as manufacturing nitrocellulose, small-arms ammunition, Navy gun ammunition, and many other critical needs, have been allowed to

⁶ Forward Operating Base Falcon was destroyed by an insurgent mortar round in October 2006. Ammunition had been stored in the open, was not properly barricaded, and was without a top cover. Encroachment led to the placement of working and living quarters within safety arcs.

⁷ Ammunition Industrial Base Strategy briefing, December 2008.

⁸ Barry D. Watts, *Strategy for the Long Haul: The US Defense Industrial Base, Past, Present and Future*, Center for Strategic and Budgetary Assessments, Washington, DC, 2008, p. 55.

⁹ P.W. Singer, pp. 160-161.

atrophy or simply disappear, along with secondary sources of munitions productions and supply chains. Many production lines at installations have been either laid away in storage or cannibalized within the installation in an attempt to minimize maintenance costs.

The deficiencies of the munitions base came to light during the operations following the terrorist attacks of 11 September 2001. When contract clauses for additional rounds were activated, not one plant within the system could meet the requested production schedules immediately. Herculean efforts at plants and depots brought many, but not all, munitions contract buys up to speed.

One of the major problems was the manufacturing of small-arms ammunition. When Lake City Army Ammunition Plant, as the only small-arms ammunition plant in DOD, could not meet expanded contract requirements, DOD was forced to buy small-arms ammunition from the United Kingdom, Israel, and South Korea to meet its requirements. Lake City was able to produce the contract-scheduled rounds 3 years after the terrorist response began in 2001, but many ammunition lots bought by the Government were acceptable only after quality waivers.

The small-arms purchases from our allies did not go well. Ammunition procured from the United Kingdom performed to NATO standards in our weapons, but a difference in propellant mixes fouled out combat weapons quickly. The Department of the Army quickly directed that United Kingdom ammunition would not be allowed into combat areas and would only be designated as training ammunition.

Our purchase from Israel did not fare much better. Though the ammunition worked as intended in our weapons, many in the theater were concerned that use of Israeli head-stamped ammunition would create a backlash in Arab nations. All Israeli ammunition was relegated to training requirements, just as the United Kingdom ammunition had been. Only the Korean buy of ammunition worked out well for us. In the end, the United States shipped much of the foreign-bought small-arms ammunition to other nations requiring munitions support.

Tangible Results of Loss of Expertise

During the early to mid 1990s, many uniformed munitions leaders foresaw the coming crisis in the munitions base. However, a response was hampered by the loss of munitions-experienced general officers in senior leadership positions and by the insistence of higher headquarters on consolidating or eliminating selected operations, such as contracting out installation ASPs. Munitions general officer positions were incorporated into an Ordnance Corps that is dominated by

vehicle maintenance concerns and spends very little time on munitions-associated challenges. Munitions operations have struggled ever since.

Radford Army Ammunition Plant in Virginia, the only domestic maker of nitrocellulose (used in propellant production), did not degrade overnight into its current shape. The failure of Radford to produce nitrocellulose for any length of time would halt the production of any items requiring propellant. Yet the concerns of each commander at Radford (and those at other plants) have fallen on deaf ears.

The munitions base has problems because of the overall neglect of capital and real-property improvements since the early 1990s. The few remaining installations in the ammunition base are being used at the same, if not greater, levels than during World War II, the Korean War, or the Vietnam War, and with essentially the same equipment.

What the munitions base requires now is real leadership and novel ideas, not the same solutions that have been proposed, considered, and ignored over the last 20 years. And the ammunition community cannot afford to continue to be the billpayer for other Army and AMC programs.

Should DLA Manage Munitions?

DLA is responsible for all classes of supply except munitions, an oversight that has had a negative impact on overall munitions management. Theater commanders and planners need one person to talk to about munitions needs, not a committee of all service personnel as exists today.

DLA provides item management for more than 80 percent of all supplies to all services and does it very well.¹⁰ Why then does DLA not manage munitions? In our research, we could not unearth any basis for this exception except anecdotal reasoning. We came to the conclusion that service munitions managers are under the mistaken conviction that a joint munitions representative would not understand their requirements and needs. However, this was exactly the same argument that was raised when DLA was established to manage all commodities except class V. DLA can look across all services to rectify any supply challenges—a capability that does not exist today in munitions.

For example, during Colonel Schorr's time as the theater ammunition planner of the Coalition Forces Land Component Command (CFLCC), his shop had to overcome many obstacles and challenges invented by services outside of the Army about why CFLCC could not manage their munitions. However, when service challenges occurred, it was up to the CFLCC shop to settle the issues.

¹⁰ Clark A. Murdock, et al., *Beyond Goldwater-Nichols: U.S. Government and Defense Reform for a New Strategic Era*, Center for Strategic and International Studies, Washington, DC, July 2005.

One such issue arose when an Air Force-ordered ship carrying 14 million pounds of net explosive weight was bound for a port with a 2-million-pound limit. If DLA had had visibility of all requisitions (or, for that matter, if the CFLCC shop had visibility), many of the challenges and disputes that occurred among the receiving country, the Military Surface Deployment and Distribution Command, the services, and the harbor master could have been avoided. We believe, there is no reason why DLA cannot manage all service munitions today.

Recommendations

We suggest the following changes to improve the management of munitions in DOD.

Move munitions item managers from AMC to DLA. DLA manages all classes of supply except munitions. From a management perspective, it makes much more sense to have one manager of all munitions for all services to take advantage of unity of effort in accounting, ordering, storing, and issuing. All munitions managers could be on one automated accounting system (such as the Standard Army Ammunition System-Modernization) rather than the service-specific systems in use today. The reduction in accounting services would save funding designated to upgrade, monitor, and train on separate systems and improve visibility of the entire DOD stockpile.

(During a recent briefing, PEO Ammunition personnel were concerned that DLA would make combatant commanders account for their munitions. We found that comment particularly alarming because that is exactly what regulations require commanders to do. PEO Ammunition also had an issue with the DLA surcharge on services provided, but AMC does exactly the same thing—except that AMC calls its additional charges a “tax.”)

Move PEO Ammunition to the DUSD (ATL). The PEO must be given the power to buy all munitions for all services, not just common munitions items. The buying power for service-specific munitions components (such as steel, brass, and electronics) at sub-suppliers has eroded because the buys are much smaller when done separately. Consolidating purchases makes commodity prices much cheaper and will put DOD farther up on a manufacturer’s customer list. The DUSD (ATL) could certainly draw more attention to the needs of the munitions industrial base and would be able to request and prioritize construction requests from the base.

Restructure the contracts that govern contractor-operated ASPs around the world, specifically garrison operations, to allow and encourage military participation. Currently, munitions handlers at most installations are not allowed to operate, or even partially operate, ASPs. Munitions management and handling skills are perishable, as other warfighting skills tend to be. The worst time to learn your trade in support of combat operations is on the battlefield.

Reinstate the munitions officer specialty, or at a minimum, reinstate the ammunition management requirements under an additional skill identifier.

Munitions are poorly managed on the battlefield because personnel do not receive the experiences in garrison that they need to operate munitions facilities and information systems before they deploy. BCT commanders have little confidence in their munitions managers, and their doubts lead them to request excess munitions for “just in case” scenarios. This is an expensive and wasteful way of conducting business.

Restructure ammunition production facility contracts so that munitions operating contractors have a minimum of 20 years of time at a production facility. This contract restructuring should be a first step in commercializing munitions productions and will enable DOD to gauge whether or not commercial munitions production is viable. Past studies from RAND, Pacific Northwest National Laboratories, the Government Accountability Office, and the National Defense University have recommended the commercialization of all munitions production.

Commercialization of munitions productions will lead to modernized and efficient production facilities that are capable of meeting future munitions changes and needs for all services. As it stands today, our munitions infrastructure is meeting wartime requirements after an infusion of hundreds of millions (if not billions) of dollars, but it will become older, more expensive, and less flexible in meeting future weapons needs without major improvements.

Revitalizing the ammunition industrial base requires some major innovations. We believe that moving ammunition management from an Army single manager supporting all of the services to a joint function under DUSD (ATL) and DLA will help to ensure that our Nation will continue to be the “arsenal of democracy” in the 21st century.

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Army Modernization Strategy Released

Lieutenant General Robert P. Lennox, the Deputy Chief of Staff, G-8, Department of the Army, released the 2010 Army Modernization Strategy on 23 April. The modernization strategy strives to meet two key objectives established in the 2010 Quadrennial Defense Review: rebalancing capabilities while building new ones to deal with future threats, and reforming institutions and processes to support the warfighter while ensuring taxpayer dollars are spent wisely. The strategy also serves as the blueprint for how the Army will achieve its goals for equipping the force in terms of versatility, tailorability, networking ability, and the fielding of capabilities on a rotational cycle.

Some of the Army modernization efforts outlined in the strategy include—

- ❑ Replacing chemical, biological, radiological, and nuclear protective equipment and reconnaissance capabilities. This includes updating the M93 series with a Stryker nuclear, biological, chemical reconnaissance variant and issuing the M50 joint service general purpose mask by 2012.
- ❑ Replacing the fleet of M113 vehicles.
- ❑ Divesting tactical wheeled vehicles (TWVs) over 20 years old and recapitalizing other TWVs.
- ❑ Implementing the joint light tactical vehicle in fiscal year 2015.
- ❑ Replacing outmoded and outdated water trailers with “Camel” technology (which has the ability to heat and cool its contents).
- ❑ Implementing the Machine Foreign Language Translator System family of products by 2011, which would be used to overcome critical translator shortages and enable Soldiers, regardless of mission, to interact and be productive at low-level linguistic tasks and basic communication with a broader cross section of a local national population.

More information on modernization efforts can be found in the 2010 Modernization Strategy located on the Army G-8 website, www.g8.army.mil/.

Iraq Drawdown Is Key to Afghanistan Buildup

The drawdown in Iraq is in full swing, and as of April, the Army had moved 35 percent of the equipment and materiel slated for retrograde out of the country. More than half of the equipment leaving Iraq will go to Afghanistan, according to Lieutenant General William G. Webster, commander of the Third Army, who is overseeing the drawdown in Iraq and the buildup in Afghanistan. Modifications and repairs will be made at Camp Arifjan, Kuwait, before the equipment is transferred—not only to upgrade equipment, but also to adapt the equipment to a new and different operational environment.



Thousands of vehicles and pieces of equipment sit at the Port of Shuaiba in Kuwait, which receives and ships the equipment as part of the drawdown of Iraq and the buildup of Afghanistan. (Photo by SPC Monte Swift)

Equipment from Iraq that is not transferred for use in Afghanistan will be disposed of, reintegrated for additional Army use, or sold to foreign militaries. The Army Materiel Command and the Defense Logistics Agency are working with units in Iraq to determine the best and most cost-effective course of action concerning each piece of equipment slated to leave Iraq.

During a Department of Defense press conference on 2 April, Webster said that one example of how the Army is updating equipment for use in Afghanistan is the evolution of the mine-resistant ambush-protected (MRAP) vehicle. He noted that the newly introduced MRAP all-terrain vehicle is better suited for the “rough terrain and terrible roads in Afghanistan” and is being shipped by air “at a rate of about 400 a month, and we plan to move that up to about 1,000 a month to get them into Afghanistan over the next couple of months.” The vehicles will replace up-armored high-mobility multipurpose wheeled vehicles and larger MRAP vehicles currently in use.

Army Sustainment Application Now Available on iTunes

Army Sustainment now has an application (app) on iTunes. The free app gives readers access to the latest articles and will eventually provide the ability to submit live feedback to article content. In order to access the *Army Sustainment* app, you must have iTunes installed on your computer and then use iTunes to download the app to an iPhone, iPod, or iPad.

Readers interested in accessing the app can use this link: itunes.apple.com/app/army-sustainment-magazine/id369807203?mt=8. Anyone interested in finding out more about the upcoming sustainment apps can send an email to leescoemobile@conus.army.mil, join SCoE [Sustainment Center of Excellence] Mobile on Facebook, or call (804) 765-1947.

RECENTLY PUBLISHED

Field Manual (FM) 1-0, Human Resources Support, published in April 2010, is the Army's basic source of doctrine for human resources (HR) support. The FM promotes a common understanding of HR support fundamentals and divides core HR functions into four HR core competencies:

- ❑ Man the force, encompassing personnel readiness management, personnel accountability, strength reporting, retention operations, and personnel information management.
- ❑ Provide HR services, which includes essential personnel services (including military pay transactions), postal operations, and casualty operations.
- ❑ Coordinate personnel support, which includes the tasks that battalion S-1s and above are required to coordinate and band operations.
- ❑ Conduct HR planning and operations, which includes HR command and control, HR staff operations, and establishing standing operating procedures and operation orders.

The FM also specifically addresses the organization structure standard requirements code 12 units and other elements that provide HR support and provides planning and management tools for HR rear detachment operations, theater opening and redeployment, casualty estimations, and civilian support.

FM 4-92, Contracting Support Brigade, published in February 2010, supersedes FM 100-10-2 and describes how contract support brigades (CSBs) and their subordinate elements—contingency contracting teams, senior contingency contracting teams, and contingency contracting battalions—are aligned to support the operational commander's mission. CSBs are assigned to the Expeditionary Contracting Command, a recently established subordinate command of the Army Materiel Command. CSBs provide operational commanders with the specialized capabilities of operations contract support planning, integration, and contractor management to offer additional sustainment support capabilities, sustained operational momentum, and effective transition from combat to security and stability operations.

FM 4-94, Theater Sustainment Command, published in February 2010, is the first doctrinal update for this modular formation since 2003. The FM outlines effective command and control application and how the theater sustainment command (TSC) relates to combatant commands as part of the modular Army and modular logistics structure. The FM also provides a detailed outline of the many roles and responsibilities of units and individuals under the TSC structure.

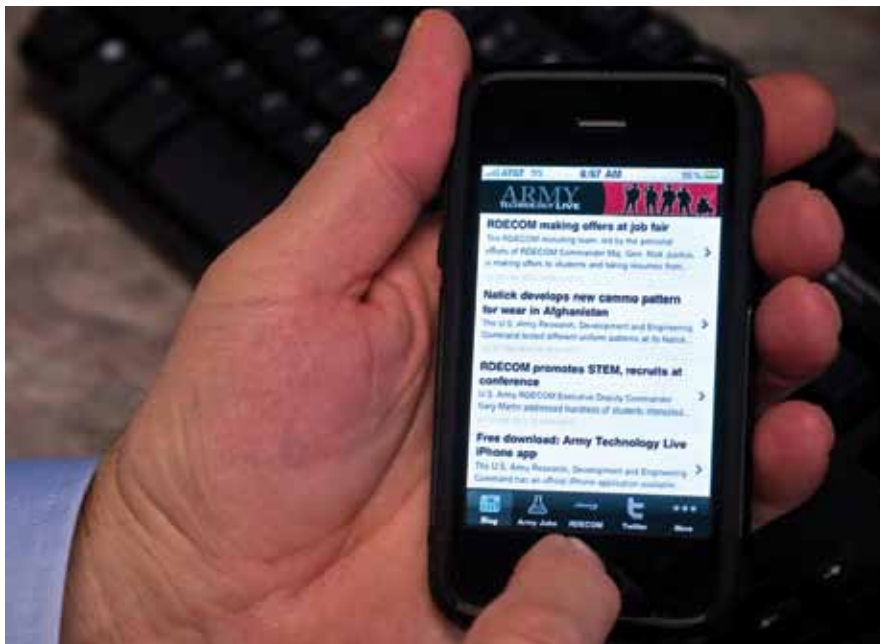
Army Technology Live Is Free on iPhone

The Army Research, Development and Engineering Command (ARDEC) has now made its technology blog, which was created last fall, available on the iPhone. A free application was launched 19 February, giving users access to Army technology news, social media, and job postings.

ARDEC plans to use the platform to inform the public about initiatives it is currently working on, to advance conversations about Army technologies, and to showcase the work of the Army technology team. The free

iPhone application is available in the iTunes store. To visit Army Technology Live on the web, go to armytechnology.armylive.dodlive.mil.

The new iPhone application for Army Technology Live is free and can be found in the iTunes store. (Photo by David McNally, Army Research, Development and Engineering Command Public Affairs Office)



Sustainment Center of Excellence Is Now on Facebook

The Army Combined Arms Support Command Sustainment Center of Excellence (SCoE), located at Fort Lee, Virginia, is now on Facebook. “SCoE Nation” offers news and links relevant to Fort Lee and to the Army sustainment community and features Facebook pages of other Army sustainment organizations, such as the Transportation Center and School, the Quartermaster Museum, and the Advanced Food Service Training Division of the Joint Culinary Center of Excellence. To visit the SCoE Facebook page, go to <http://www.facebook.com/SCoECASCOM>.

Army Budget for Fiscal Year 2011 to Target Rebalance Imperatives

President Barack Obama’s proposed budget for the Army was submitted to Congress on 1 February. The fiscal year (FY) 2011 budget request totals \$245.643 billion, a \$6.243 billion, or 2.61 percent, increase over FY 2010 spending. Over one half of that increase comes in the form of overseas contingency operations (OCO) funding. The President is asking \$102.211 billion for OCO, an increase of \$3.735 billion, or 3.789 percent, more than FY 2010 OCO spending. The President is also asking for a \$143.432 billion base budget, an increase of \$2.508 billion, or 1.78 percent, over the FY 2010 base appropriation.

Spending requests by major category, including those for OCO, are—

- ❑ Military personnel: \$65.886 billion (an increase of 0.43 percent over FY 2010).
- ❑ Operation and maintenance: \$106.858 billion (7.02 percent above FY 2010 spending).
- ❑ Procurement: \$30.268 billion (down 0.79 percent).
- ❑ Research, development, test, and evaluation: \$10.484 billion (a decrease of 9.11 percent).
- ❑ Military construction: \$6.201 billion in FY 2011 (up 9.37 percent).
- ❑ Family housing: \$610 million in FY 2011 (down 23.46 percent).
- ❑ Joint Improvised Explosive Device Defeat Fund: \$3.466 billion in FY 2011 (up 51.75 percent).

In FY 2011, the procurement request will support the acquisition of—

- ❑ 49 UH–60M and 25 HH–60M Black Hawk helicopters with digitized cockpits and wide-chord blades for \$1.391 billion.
- ❑ 9,178 parachutes for \$69.496 million, including 8,404 advanced tactical parachute systems, 385 joint precision airdrop systems, and 389 enhanced container delivery systems.

- ❑ 207 systems from the mine-resistant ambush-protected vehicle family, including 45 Buffalo mine-protected clearance vehicles, 111 Panther medium mine-protected vehicles, 47 vehicle-mounted mine-detection systems, and 4 route-clearance training simulators for a combined \$367.678 million.
- ❑ 55 line-haul trucks for \$37.519 million.
- ❑ Family of heavy tactical vehicles’ equipment, including 776 heavy expanded-mobility tactical trucks (HEMTTs), 105 heavy equipment transporter system (HETS) tractors, 292 palletized load system (PLS) trucks, 6,730 container roll-in/out platforms, 1,635 enhanced container handling units, and 2,689 movement tracking systems, totaling \$738.418 million.
- ❑ Recapitalization of 42 trucks and 1,347 trailers through the PLS extended service program for \$100.108 million.
- ❑ Recapitalization of 479 pieces of HEMTT equipment through the HEMTT Extended Service Program for \$174.565 million.
- ❑ 4,651 trucks and 1,341 trailers for the family of medium tactical vehicles for \$1.435 billion.
- ❑ Recapitalization of 9,270 high-mobility multipurpose wheeled vehicles (HMMWVs) for \$989.066 million.
- ❑ 2,359 light tactical trailers for \$25.560 million.
- ❑ 41 rough-terrain container handlers for \$34.022 million. These are required to fill critical shortages supporting the movement of a large number of containers from overseas ports through the theater distribution system and centers to forward support areas.
- ❑ 100 lightweight water purifiers totaling \$15.683 million. The portable water purifiers were developed for use during early entry, rapid tactical movement, and independent operations. They are capable of purifying 75 gallons per hour (GPH) from a saltwater source and 125 GPH from a freshwater source and are also HMMWV transportable.
- ❑ 1,208 petroleum and water distribution systems for \$230.174 million.
- ❑ 22 Force Provider modules with 6 power generation kits, 6 cold weather kits, and 6 Force Provider Expeditionary Tricon sets for \$303.139 million. Each deployable tent city provides support for 550 Soldiers and is fully containerized for rapid deployment. Most of the new equipment replaces battle losses and worn out systems in theater.
- ❑ 412 field feeding systems, including 162 multi-temperature refrigerated container systems, 78 food sanitation centers, 59 containerized kitchens, and 113 assault kitchens, totaling \$53.729 million.
- ❑ 57 mobile integrated remains collection systems for \$26.532 million.
- ❑ 1,309 mobile maintenance equipment systems, including 270 forward repair systems, 820 shop-equipment contact maintenance systems, 50

shop-equipment welding trailers, and 169 standard automotive tool sets for \$200.683 million.

- ❑ One joint high-speed vessel (JHSV) for \$202.764 million. The Army is combining its JHSV program with that of the Navy, and the Navy will take the lead in further acquisition.

The Army has also requested \$99.819 million toward continued efforts on the Single Army Logistics Enterprise system, which is aimed at integrating supply maintenance, ammunition supply, and personnel management data into a single system. The FY 2011 funding supports the acquisition and fielding of computers for life-cycle and transformation replacements for combat sustainment systems essential for day-to-day operations.

U.S. Army Europe Cooks Take Honors at 2010 Army Culinary Arts Competition

The 35th Army Culinary Arts Competition, held from 27 February to 12 March 2010 at Fort Lee, Virginia, was hosted by the newly established Joint Culinary Center of Excellence—a joint school for all Department of Defense cooks.

The competition included more than 200 participants from across the services who vied for the top spots as the Installation of the Year, the Armed Forces Chef and Junior Chef of the Year, and other food service honors.

U.S. Army Europe (USAREUR) received Installation of the Year honors, ahead of Team Fort Bragg, North Carolina, and the third place winner, Team Coast Guard.

Staff Sergeant Joshua Spiess from Fort Monroe, Virginia, is the Armed Forces Chef of the Year for 2010, and Private First Class Antoinette Davison from Team USAREUR is the Armed Forces Junior Chef of the Year. USAREUR also received best team buffet table in show and four more individual awards—

- ❑ Sergeant Ken Turman for best exhibit in show, cold platter.
- ❑ Staff Sergeant Stevie Bronson for best exhibit in show, cold appetizers.
- ❑ Specialist William Pelkey for best exhibit in show, patisserie/confectionary.
- ❑ Specialist William Pelkey for best in class, contemporary pastry.

Collective winners were Team Fort Monroe in the Field Cooking Competition, Team Fort Bliss,

Texas, in the Student Team Skills Competition, and Team Fort Bragg in the Baron H. Galand Culinary Knowledge Bowl. Team Puerto Rico had the best ice carving in show, and Team Fort Hood, Texas, captured the judges' special award, cold food table. Chief Petty Officer Derrick Davenport and Petty Officer First Class Michael Edwards, representing Team Navy, won the Nutritional Hot Food Challenge.

Receiving individual recognition were—

- ❑ As the Army Senior Enlisted Aide of the Year, Sergeant First Class Sherra Jackson from Fort Myer, Virginia.
- ❑ As the Army Junior Enlisted Aide of the Year, Staff Sergeant Jose Alves from Fort Lee.
- ❑ For best in show, showpiece, Master Sergeant Mark Morgan from Fort Monroe.
- ❑ For most artistic exhibit in show, Sergeant Trent Skinner from Team U.S. Army Reserve.
- ❑ For best in class, contemporary cooking, Sergeant Billy Daugette from Team Pentagon and Sergeant Ashley Shei from Team Hawaii.

Private First Class Jessica Cruz-Kenschaft, from Team Fort Bragg, North Carolina, dabs glaze on her dish before displaying her creation at the cold display table at the 35th Culinary Arts Competition at Fort Lee, Virginia. (Photo by Daren Reehl)



If you are interested in submitting an article to *Army Sustainment*, here are a few suggestions. Before you begin writing, review a past issue of *Army Sustainment*; it will be your best guide. Then follow these rules:

- ❑ Keep your writing simple and straightforward (try reading it back to yourself or to a colleague).
- ❑ Attribute all quotes.
- ❑ Identify all acronyms, technical terms, and publications (for example, Field Manual [FM] 4-0, Sustainment).
- ❑ Do not assume that those reading your article are necessarily Soldiers or that they have background knowledge of your subject; *Army Sustainment's* readership is broad.
- ❑ Submissions should generally be between 800 and 4,000 words. (The word limit does not apply to *Spectrum* articles. *Spectrum* is a department of *Army Sustainment* intended to present researched, referenced articles typical of a scholarly journal.)

Instructions for Submitting an Article

- ❑ *Army Sustainment* publishes only original articles, so please do not send your article to other publications.
- ❑ Obtain official clearance for open publication from your public affairs office **before** submitting your article to *Army Sustainment*. **Include the clearance statement from the public affairs office with your submission.** Exceptions to the requirement for public affairs clearance include historical articles and those that reflect a personal opinion or contain a personal suggestion.
- ❑ Submit the article as a simple Microsoft Word document—not in layout format. We will determine layout for publication.
- ❑ Send photos and charts as separate documents. Make sure that all graphics can be opened for editing by the *Army Sustainment* staff.
- ❑ Send photos as .jpg or .tif files—at least 300 dpi. Photos may be in color or black and white. Photos embedded in Word or PowerPoint will not be used.
- ❑ Include a description of each photo submitted and acronym definitions for charts.
- ❑ Submit your article by email to leeelog@conus.army.mil or by mail to—

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If you mail your article, please include a copy on CD if possible.

If you have questions about these requirements, please contact us at leeelog@conus.army.mil or (804) 765-4761 or DSN 539-4761. We look forward to hearing from you.

Along with the competition, tryouts were held for the U.S. Army Culinary Arts Team, which will participate in the World Culinary Cup in Luxembourg this November.

Lightweight Performance Hood Guards Against Disfiguring Injuries

The lightweight performance hood (LPH), first fielded to units last year, is made of a fire-resistant, no-melt, no-drip material that can protect Soldiers' heads and faces from flash and thermal threats that can cause severe burns. The hood replaces the combat vehicle crewman hood and the anti-flash hood. Two LPHs are being issued to each Soldier. The hood also minimizes heat stress in hot, dry climates and has limited heat retention in cool climates. It can be worn with the advanced combat helmet and is antimicrobial and anti-odor and uses moisture-wicking technology.

UPCOMING EVENTS

Performance Based Logistics 2010

Performance Based Logistics 2010 will be held from 26 to 28 July at the Marriott Crystal Gateway in Arlington, Virginia. This year, the military logistics conference, sponsored by Worldwide Business Research, will focus on uncovering the issues and challenges of implementing the Weapons System Acquisition Reform Act. The event will also offer advice on achieving and maintaining the materiel readiness and operational capability of weapon systems, sub-systems, software, and support systems.

For more information or to register, visit the conference webpage at www.pblusa.com or call (636) 200-7530.

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